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ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON ARMED SERVICES

HOUSE OF REPRESENTATIVES

EIGHTY-SIXTH CONGRESS

FIRST SESSION

UNDER AUTHORITY OF

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REPORT OF THE SPECIAL SUBCOMMITTEE INQUIRY INTO THE ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN THE EVENT OF MOBILIZATION

On July 15, 1959, the subcommittee at the direction of the chairman of the full Committee on Armed Services, Hon. Carl Vinson, commenced an inquiry into the adequacy of transportation systems in support of the national defense effort in the event of mobilization.

Introduction

In view of the changing concepts of conflict, due to spectacular developments in nuclear capability and weapons delivery capacity, there is a growing concern whether the transportation systems would be able to support the mission they may be called upon to accomplish.

It should be emphasized at this point that this inquiry was in the nature of a study and was not based on any existing or planned legislation. Whether the outcome would suggest or indicate the need for any legislation depended, in the main, on what was learned from the various witnesses as to the demands that would be made upon the transportation systems and whether these systems would be able adequately to satisfy these demands in the manner necessary to a successful support of the national defense effort.

Since in all previous experience and planning for mobilization, from the standpoint of transportation, we have enjoyed the luxury of time to build our capacity to transport, we realize that due to changing concepts of war this luxury in all probability will no longer be available to us and we will be obliged to do with what we have. The need for adequate transportation systems, in being, is therefore, obvious.

Transportation systems, like the circulatory system of the human body, will have only as much ability, reserve, capacity, and degree of adaptability as might logically result from a physically and economically healthy, active industry. Since all parts of the system contribute to the whole, the entire structure will be no healthier than its weakest section.

The natural competitive forces in our system of free enterprise, which have made our industries sensitive to the day-to-day demands of their customers, have in like manner forged national systems of commerce which would be keenly responsive to the more pressing demands of war. Transportation in particular has had to go where the needs of trade and travel called it, and to adjust to new and changing markets.

Today the Nation's resources are directed primarily toward providing the needs, comforts, and conveniences of living. Tomorrow they may have to be translated into the sinews of war.

In view of the threat faced by this Nation, of possible mass nuclear attack against our centers of population and industry and our bases of retaliation, the current responsiveness of all of our resources assumes a high importance. Should war come suddenly to this continent, it would be today's trained people and the existing plant and facilities which would have to meet it. For this reason stress is placed on the importance of industry's current health and continuing ability to respond instantaneously to any emergency which might arise.

In our effort to determine the stated objective of the subcommittee, we received testimony from those Government agencies most concerned with transportation matters—Commerce, OCDM, ICC, DOD, and FAA—representatives of each of the military services, as well as the common carriers and carrier associations. Each of them presented their views in line with the subcommittee's interest. The picture which evolved from these presentations is set forth below.

In this report we have dealt with each mode of transportation individually and have set forth the data presented to the subcommittee. Our conclusions and recommendations appear at the end of the report. No effort was made to list the various modes of transportation in the order of importance and no such inference should be drawn therefrom. Although there is duplication in services provided,

each mode has an important place in its own field. All of them, performing in concert, have produced the record cited below.

In our deliberations we have attempted to judge the adequacy of the various modes of transportation to fulfill the mission they will be called upon to accomplish by determining their present capability according to the measures generally employed by the transportation industry, their potential for expansion by reason of economic development, and the ability of each mode of transportation to handle an expanded volume of traffic with the plant "in being" in time of emergency.

Since fuel, if in short supply, may well be a controlling factor in the mode of transportation to be used, it has been treated in a separate section of this report and is not included in the individual sections related to the various modes of transportation.

Growth of the Nation and Transportation

In order to have a clear understanding of the present economic and physical status of the various modes of transportation—land, water, and air—it is necessary, first of all, to consider the overall growth of the Nation in the past two decades. Since 1940 there has been an increase in population from 131.5 to 176 million, in the civilian labor force, from 47½ to 66 million; and in the gross national product, from 206 billion to an estimated annual rate of 418 billion in the first quarter of 1959 (viewed in constant 1954 dollars).

Along with the growth of these basic economic indicators, there has been a similar expansion in the transportation plant to keep pace therewith. Currently, the railroad industry and the transportation industry other than rail, respectively, are making new plant and equipment expenditures at rates slightly in excess of $1 billion and $2 billion annually. By comparison, these two groups expended only $280 million and $365 million in 1939. Part of this increase is, of course, accounted for by changes in the price level.

A similar increase in productivity within transportation occurred during this period. Transportation is now producing at an annual rate of 1.4 trillion intercity ton-miles and 0.7 trillion passenger-miles as compared with 0.6 trillion and 0.28 trillion, respectively, in 1940. Intercity ton-mileage is 24 percent higher than in 1944 and passenger-mileage is 135 percent higher than in 1945—the peak war years in each case. It should be noted that the greater part of the passenger-miles was generated by use of private auto.

If these were the only factors, plant expansion and increased productivity, which needed to be considered to establish the adequacy of transportation systems to support the national defense effort, the answer to the question of adequacy would undoubtedly be a simple and resounding "Yes." A transportation plant which in peacetime can far surpass, both in ton and passenger mileage, the magnitude of the operation in the peak years of World War II, certainly should be able to do whatever it could conceivably be called upon to do. However, the answer is not so simple. Many other factors must be considered before any conclusion can be drawn. In the following discourse we have attempted to seek out these imponderables and weigh their relationship to our problem.

AIR TRANSPORT

That there will be a major role for air transportation, both passenger and freight, at time of mobilization, is a fact that needs no explanation or amplification. This mode of transportation provides the "speed of reaction" so necessary in time of emergency. Its importance in mobilization planning is highlighted by the fact that the Department of Defense (DOD) has deemed it necessary to establish the Military Air Transport Service (MATS) as a force "in being" to meet "wartime requirements" for this type of transportation. In addition, the DOD has instituted a program for the utilization of civil aircraft, called the civil reserve air fleet (CRAF), in direct support of military operations. This operation is to be conducted under contract between the airlines and the Government. Under these contracts, one of which had been signed as of the start of these hearings, not only will a certain number of civil aircraft be allocated to the CRAF but also the existing organizations and technical knowledge of the airline industry's personnel.

Passengers

The passenger-carrying capability of the air-carrier industry available for domestic use, after equipment assigned to CRAF has been allocated to international service overseas, is limited to equipment assigned to the war air service pattern

(WASP). The WASP is that portion of the commercial air fleet that remains after the assignment to CRAF. It consists of two- and four-engine planes, and inasmuch as the general capability of the four-engine plane is roughly three times that of a two-engine plane, the DOD deems it desirable that additional four-engine planes be assigned to the WASP. The introduction of new jet aircraft should allow for the release of some four-engine aircraft from CRAF to WASP.

The air transportation industry is presently undergoing a transformation with the phasing out of many piston-type aircraft and the phasing in of turbojet aircraft.

Long before the introduction of either turboprop or turbojet aircraft, the airline industry began its strong upward thrust in terms of added capacity and increased output. In the first postwar year of 1946, domestic trunk airlines and foreign and oversea air carriers handled scheduled revenue passenger-miles of 5.9 billion and 1.1 billion, respectively. By 1958, these totals had increased to 24.4 billion and 6 billion passenger-miles.

Available seat-miles, a measure of airline capacity, increased for the trunklines from 7.5 billion in 1946 to 40.7 billion in 1958, and for foreign and overseas lines from 1.6 to 10.1 billion.

Between 1946 and 1958 the domestic airlines increased their participation in total intercity passenger-miles of commercial transportation agencies from 6 to 35 percent.

Turbojet air transportation, signalized principally by sharp decreases in scheduled flight time and extremely large carrying capacity, is revolutionizing the airline industry.

With speeds of the order of 600 miles per hour and passenger-carrying capacities as high as 170, one of the largest of the jet aircraft is capable of generating as much passenger mileage per year as a 40,000-ton ocean liner. This example shows clearly the marked changes occurring in airlift potential and in the relative position of different agencies of transportation in moving persons and property.

The introduction of jet aircraft, however, poses serious problems which may, to some extent, retard its development.

The economic and financial implications of the introduction of jet aircraft include the high initial cost of the aircraft, the problem of disposing of surplus piston-engine types, and the possible need for low fares to encourage the rapid development of traffic to maintain load factors at satisfactory levels.

In addition, there are technical problems involving the construction and operation of new facilities, lengthening of runways, improving communications, and the establishment of upper air observation stations to be considered, also because of the cost factors attendant thereto.

Freight

Air cargo traffic has not increased as rapidly as passenger traffic, although it has shown a sharp rise from the levels of the early postwar years. For example, domestic trunkline cargo ton-miles totaled 290 million in fiscal 1958 compared with only 89 million in fiscal 1948. The corresponding figures for international U.S. airlines were 151 million and 46 million in 1958 and 1948, respectively.

According to the Air Transport Association (ATA), 16 DC–7 airfreighters and 15 CL–44's, the latter a Canadian built freight airplane, will be added to the commercial aircargo fleet in the next 18 months thereby greatly augmenting its cargo capability.

In addition to the above-mentioned aircargo carried by commercial airlines, MATS, operating internationally, carried 1,141 million ton-miles of cargo in fiscal year 1959. At present the total aircargo traffic is 1.8 billion ton-miles.

Aircargo traffic, though of some proportions when viewed above, is only a small part of the more than 1¼ trillion intercity ton-miles of traffic carried by all modes of transportation domestically in 1958. However, its prime feature, speed of delivery, is the main factor highlighting its importance in our defense planning and therefore overrides any other consideration as to its relative position in peacetime freight traffic.

It is in the realm of aircargo that considerable controversy exists today—not in the need for additional capability, concerning which all are agreed, but in the manner of securing it. The lack of development in this field is explained by the high cost of transporting air cargo which in turn is due to the fact that cargo capability, outside the military, exists in the form of improvised modifications of passenger configurated aircraft. Adaptation of essentially passenger configured aircraft to cargo capability results in higher direct operating costs, unnecessary and high handling charges, and inflexibility as to operating bases and facilities. The characteristics of an uncompromised cargo aircraft are unique and differ impor-

tantly from the characteristics of a passenger aircraft. Undoubtedly the development of a truly capable all-cargo aircraft, designed and developed as such from the outset, would be a constructive undertaking. It is in the "how" that the disagreement exists.

The Federal Aviation Agency (FAA) is of the belief that it would be in the national interest of the United States to have an efficient and effective aircargo fleet as an extension of national policy. In support of its contention, FAA avers that the United States does not now have a capable, effective, economical, and responsive air logistics capability to support military operations in a limited war situation; that the present military transport capability is marginal to the needs and is obsolete, being represented by a decaying fleet of C–124's, the life expectancy of which is very short. The only bright spot in this picture is the projected procurement of 50 C–133 aircraft, of which approximately one-half are currently in the inventory. The FAA alleges that this is due to the fact that, "Support aircraft under military procurement have historically suffered because of the direct competition with combat weapons system procurement. The sophisticated firstline weapons systems of today and tomorrow strongly suggest that the support aircraft requirements will continue to be plagued by a very low procurement priority."

It was contended by the FAA that the military cargo fleet (MATS) should be limited to the so-called hard core requirements; that is, military cargo aircraft used in direct support of the execution of military emergency war plans. Also that routine cargo support could be provided from outside the military in both peace and war.

In an effort to improve our posture, in this regard, the FAA called attention to the fact that the Canadian Government has a system of guaranteed loans up to 80 percent of investment which is available for the development and manufacture of aircargo planes and suggested that the U.S. Government should stimulate the development of aircargo capability by a similar system of guaranteed equipment loans. In addition, FAA indicated that the Government should make a contribution to the development costs of a suitable aircraft.

The Air Transport Association called attention to the 1 billion ton-miles of cargo traffic and 400 million ton-miles of passenger traffic handled by MATS and alleged that if the scheduled airlines were permitted to carry this traffic they could accelerate and expand their reequipment programs. The ATA feels that should MATS be relieved of the task of providing the Department of Defense with routine commercial-type air transportation, MATS could then "be ready to strike when the whistle blows."

It appears to the subcommittee, from the testimony received, that, except for certain difficulties inherent in the introduction of turbojet aircraft into regular service, the civil airline industry is capable of handling an expanded volume of passenger traffic.

The preoccupation of the airline industry with the development and acquisition of new passenger turbojet airliners suggests a dire future for the expansion of aircargo capability unless there is some form of Government assistance. Because of premium passengers tariffs (passenger revenue is about 55–70 cents per ton-mile) and the potential for rapid expansion in this field, the airline industry has become obsessed with the glamour of passenger hauling. The glamour of air travel, together with speed and convenience, has combined to lure a large number of passengers from other modes of transportation. Aircargo today is, to a great extent, limited to the high-priced, high-value items that are needed quickly. Until operating costs are reduced, resulting in the reduction of ton-mile costs to the point where they are attractive to the shipper, there will be, apparently, no substantial growth in aircargo capability. How these costs are to be reduced remains a problem.

Airports and airways

The adequacy of capacity of some of the existing airports is open to question. As stated above, the introduction of turbojet equipment is presenting news problems in this regard.

There are, of course, many airports which are not used to capacity and expansion of air activity at some of them will assist materially in handling the greatly increased load that would be placed on the air transportation system. However, this use is limited since airport capacity cannot be repositioned to meet specific needs of specific areas.

Ground-handling equipment is generally adequate, largely because airlines usually maintain their own ground-handling equipment—a practice which through duplication provides some reserve capability.

Terminal facilities for airfreight are inadequate to handle any increase in volume in this type of traffic, mainly because they presently exist only to handle the business at hand. Any increase in capability would undoubtedly see a corresponding increase in terminal facilities.

The Federal Airways system and its traffic capacity are presently undergoing a complete modernization under the direction of the FAA. At time of emergency, FAA will control all air travel, both civil and military. The Agency's objective is to develop a compatible environment in which all aircraft, regardless of mission, can be safely and efficiently accommodated.

MOTOR CARRIERS

Many efficiency factors in the commercial motor carrier business, both passenger and freight, are showing gains: The number of necessary employees has decreased substantially since World War II; more powerful and efficient engines have lowered fuel consumption per ton carried; better highways yield faster turnaround of equipment; an increasing ratio of trailers to tractor units indicates more possibilities in the utilization of motive power and motive power personnel; and increasing terminal efficiency adds more capacity to trailer and motive power inventories.

Passengers

From a statement prepared for the record by the National Association of Motor Bus Operators, data relative to this phase of the motor carrier industry was obtained.

Of a total of more than 256,000 buses in the United States, only about one-third of these vehicles are operated by common carriers either in intercity service (19,259) or local mass transportation service (58,145).

Both segments of the common-carrier bus industry have been faced with serious financial problems over the last dozen years, as the combined result of declining patronage and greatly increased cost of operations. In local transit, the number of passengers carried by bus has declined by more than a third while payroll cost alone per vehicle-mile has increased by nearly 75 percent. The traffic on intercity buslines, as measured by passenger-miles, has declined about one-fourth since 1946 while, at the same time, expenses per vehicle-mile have risen by 50 percent.

The decline in patronage experienced by the motor common carriers of passengers is principally the result of the phenomenal increase in the use of automobiles in recent years.

In the case of intercity bus operations, it is estimated that the current annual total of approximately 1.22 billion vehicle miles could be increased only to about 1.25 billion miles. On the other hand, the potential increase in available passenger miles of transportation is considerably greater by virtue of the fact that the load factor (passenger miles as a percentage of seat miles) is currently little more than 50 percent. The maximum practicable load factor as based upon experience during World War II is 75 to 80 percent. It follows, therefore, that, in the event of mobilization, the intercity bus industry could supply well in excess of 35 billion passenger miles of intercity transportation as compared with the current level of about 25 billion.

On the basis of data at hand, an estimate of the potential of local bus operations is somewhat difficult, but it appears that an increase from the present traffic level of about 5.5 billion passengers annually to approximately 9 billion could be anticipated.

The foregoing estimates do not contemplate any additions to current fleets of common-carrier vehicles either by purchases of additional equipment or by the transfer of other vehicles (schoolbuses, for example) to common-carrier service.

Although, at this time, the National Association of Motor Bus Operators is not aware of any stockpiling activities in the bus industry, there exists a considerable amount of reserve capacity in the form of schoolbuses, more than 139,000, which can be called upon if needed.

It must also be noted that, although the potentials suggested above do not assume any additions to the total fleet, replacements would be necessary fairly early in any protracted mobilization period. The average age of the approximately 12,000 buses operated by class I intercity carriers subject to the jurisdiction of the Interstate Commerce Commission is about 6½ years. While data for the smaller intercity carriers are not available, it is certain that their average age is considerably higher. The same is probably true for the local transit fleet.

The estimated potential of the intercity bus industry suggested above would require an annual average per vehicle in excess of 60,000 miles. While this is

somewhat below the current average for the class I carriers, the buses operated by them are, in the main, newer than those operated by the smaller carriers who would be faced almost immediately with maintenance and replacement problems if they were to increase their annual mileages significantly.

Although there are no specific mobilization plans in effect within the industry, it should be noted that most of the carriers, particularly those operating substantial numbers of vehicles, have modern garage and repair facilities for maintenance of their equipment. Some of these shops are organized on a line-production basis which makes major overhauls possible with a minimum of time during which a bus is out of service. In addition, the carriers have systematic and well-organized preventive maintenance programs designed to keep the equipment in good mechanical condition and to avoid road failures.

As to physical facilities, the terminals and garages maintained by the bus industry appear to be generally adequate, and substantial improvements have been made in recent years. The vehicles, which constitute by far the most important industry facility, have not been replaced at the rate which would have occurred in the absence of the declines in patronage already noted. It follows, therefore, that the average age of the fleet is somewhat above the figure which would have been expected otherwise.

Some evidence of the potential of the motorbus industry to handle its share of the load is the fact that even in World War II, it increased its traffic volume almost 300 percent despite attrition of equipment and shortages in fuel, rubber, and manpower.

Freight and services

The performance of trucks during World War II, in the area of combat and in our essential civilian economy, establish their importance to our national defense.

The dependence of our Nation on trucks today is much greater than it was at the outbreak of World War II. The influence of highway transportation in shaping our economy and way of life since the close of that conflict is well known. Our burgeoning suburbs and the dispersal of our production and trade centers over ever-widening metropolitan areas are ample evidence of the changes in our way of living, producing, and distributing goods that have taken place because of the availability of efficient highway transportation.

Another indication of our greater dependence on trucks is reflected in the number in use today. There are 11 million trucks, including some 800,000 large intercity trucks, plying our 3 million miles of roads and streets serving every facet of our economy. This is more than double the number in use in 1941.

Despite this increase in the size of the fleet, as indicated above, there is not as much excess capacity in the fleet as existed at the start of World War II.

One reason for this is that the demand for truck services has been increasing so rapidly with our expanding economy that the industry has not accumulated excess vehicles.

Even though it has been buying new trucks at the rate of 900,000 per year over the past 10 years the average age of the fleet today is 7.2 years compared to 5.6 years in 1941.

Freight

Data on the performance of class I common carriers of general freight reflected that the intercity power units operated by them averaged 400,000 ton-miles per year per freight-carrying unit in 1958. These carriers operated 103,568 trailers and semitrailers in intercity service during that period and performed a total of 41,490 million ton-miles of revenue freight service or about 6 percent of the total intercity ton-miles. Haulage by all trucks amounted to about 21 percent of the total intercity ton-miles carried in that year.

As is the case of the railroads, truck trailers, used in the haulage of freight, are generally designed to handle a specific type or group of commodities and are not readily convertible to other usages. Similarly, shortages may be found to occur in special type trailers while there is a surplus in total ton-mile capacity. However, unlike the railroads, there generally exists sufficient duplicative trailer equipment, owned and operated by private companies and contract carriers, which might be called upon to take up the slack and eliminate these shortages.

Service operations

In addition to transportation, motor vehicles perform a multitude of services. Some of the major types of these services are:

1. *Governmental services.*—These include firefighting, garbage and trash removal, highway maintenance, sewer, water and similar services ordinarily performed by governmental agencies, Federal, State, and local.

2. *Agricultural services.*—Include operations both on and off the highways in connection with farming, dairying, animal husbandry, and fisheries.

3. *Extractive services.*—Include operations, both on and off highways, in connection with mining, quarrying, drilling, oil and gas production, and logging.

4. *Constructive services.*—Include dump trucking, transit mixing and delivery of concrete, and services in connection with plumbing, heating, electrical work involved in erection or repair of buildings and other structures, including highways, bridges, etc.

5. *Wholesale distributive services.*—Include distribution of goods, laundry, cleaning, and similar items of retailers, either from wholesale houses or between producers and retailers.

6. *Consumer distribution services.*—Include the delivery of goods and services of all kinds directly to consumers.

7. *Public utility services.*—Include transportation of men, materials, and supplies for the purpose of installing, erecting, repairing, and maintaining telephone, electrical, gas, and other services of this type.

8. *Terminal services.*—Include pickup and delivery services for all types of intercity line-haul carriers, railway, waterway, highway, pipeline, and air as well as warehousing and similar services.

The services performed by these vehicles which represent more than 85 percent of the trucks in use, are indispensable, and there is no overall yardstick to measure either their contribution to our economy and national defense, or their efficiency.

The great bulk of these trucks are relatively light vehicles owned and operated by private carriers including farmers and used in furtherance of some other business. While there is little doubt that some improvements in the efficiency of most of these operatious could be effected, it should be kept in mind that no other transportation agency performs, or is capable of performing, these services, and their continuance must be provided for in planning for any emergency.

From testimony received by the committee, it appears that motor carriers of property and those occupied in the performance of services are in reasonably good condition and are as able now as at any time in their history to participate in the movement of traffic under emergency conditions.

Although the growth of the trucking industry has kept pace with the balance of industry, there is little unused cargo space available. Greater availability of such transport would have to come from more intensive usage of what is available.

Terminal construction and expansion has kept pace with increased tonnage. Today, terminals with the latest mechanical freight handling equipment, adequately meet the needs of the industry.

Highways

The highway system—interstate, primary, secondary, and urban—in being and under construction, is designed to meet the requirements of modern America. The Federal highways program, encompassing the National System of Interstate and Defense Highways, begun in 1956, should cure most of the deficiencies in the highway plant which, due to various factors, became seriously obsolete shortly after the close of World War II.

RAILROADS

No plans for transport dependence can fail to take into account the railroad industry.

The versatility and adaptability of rail transport, as thoroughly demonstrated on a worldwide basis under all kinds of conditions, is but one of the reasons why military logistical planning is built around the railroads for the bulk of its freight and passenger movements. The other forms of transport, important as they are to the total need, are auxiliary and supplemental to the railroads.

During World War II, railroads shouldered the burden of war-swollen traffic, transporting over 90 percent of all military freight traffic and 97 percent of all organized military passenger movements.

Since World War II the railroads have increased the basic capacity of their line and terminals in a number of ways. They have increased the average weight of rails and the other elements which allow the carriage of heavier loads. They have installed additional miles of centralized traffic control and other systems which enable trains to move more frequently and with less interruption over a given line. They have built or modernized classification and terminal yards, permitting trains to be assembled and classified in greater volume and at faster rates. All of these basic improvements allow for heavier and longer trains

which can run, if necessary, at more frequent intervals. The result has been a large increase in basic plant capacity over that of World War II or any previous period.

However, the railroad industry has not shared proportionately in the Nation's general economic growth and prosperity during the postwar years.

The railroad share of the total of public and private intercity ton-miles has declined steadily year by year, dropping from 67 percent in 1945 to 45 percent in 1958. Throughout the period, earnings have been uneven and relatively low.

Because of these low earnings, the railroads now are in a position quite different from that in which they found themselves in 1940. At that time, the railroad industry owned substantially more cars than they needed to cover prewar requirements. With that surplus and their unique ability to expand their capability without a proportionate increase in fuel, manpower and equipment, the railroads were able to amass the record set by them in World War II. Today, the railroad industry does not have the reserve equipment necessary for such expansion despite new capital expenditures totaling more than $14 billion since the end of World War II.

Passengers

The railroad industry, which at one time enjoyed a virtual monopoly in intercity commercial passenger transportation, has seen its position deteriorate in the past two decades from 67.8 percent in 1939 to about 31 percent in 1958 of the total for-hire transportation in this field. At the present time, buses and airlines each carry a slightly higher amount with about 2.4 percent going to the inland waterways.

A full realization of the status of intercity passenger traffic cannot be realized without consideration of the position of private transportation in the scheme of things. At present, this mode of travel accounts for 90 percent of all intercity passenger-miles and there is no indication of any decrease in this situation in the offing.

Since it has been shown by experience that in the event of war or other national emergency the common carriers are the most reliable and efficient form of transportation, the growing use of private transportation must be regarded as presenting a serious national defense problem.

As might be realized with a decline in the amount of passenger transportation there has been a similar decline in the means of such transportation; that is, pullmans, coaches and those items of railroad equipment necessary to a successful and efficient operation of long and short-haul passenger service. According to data supplied by Mr. James M. Symes, president of the Pennsylvania Railroad Co., total ownership by class I railroads and the Pullman Co. of passenger carrying cars declined from 30,052 (seating capacity 2,163,744) in 1939 to 18,577 (seating capacity 1,226,082) in 1958. During this period there has been a similar decline in the appurtenances of passenger traffic, such as dining, lounge, club and baggage cars and the like. Despite increases in such items as, cars per train, passengers per car and train, miles per active locomotive-day, passenger train speed, car-miles per train hour, and car- and passenger-miles per train hour, all of which would be expected to induce an increase in the use of this mode of travel, nevertheless the decline has been steady and continuous. In the field of commutation traffic, however, the number of passengers in 1958 was slightly more than in 1939.

No consideration of the capability of the railroads to transport passengers would be complete without a review of the condition of its equipment. Poor condition thereof would, admittedly, limit its capability.

According to data supplied to the committee, the average age of passenger cars, owned or leased by class I railroads and the Pullman Co. as of January 1, 1958, was 28½ years; more than 53 percent are over 30 years of age and only about 15 percent were purchased within the past 10 years.

Another item in this category is the some 1,700 passenger cars presently stockpiled by the Department of Defense on a lease arrangement with the owners. Since these cars were stockpiled in lieu of their being scrapped, the present condition of many is questionable and their continued retention is under consideration by the DOD. It is sufficient to note that in computing its requirements for railroad passenger service and the capability of the industry to satisfy these requirements, the DOD did not include within the capability these stockpiled cars.

With the retirement of passenger cars greatly exceeding installations of new equipment in ever increasing numbers and the total in need of repairs decreasing only slightly (from 9 percent of cars owned in 1939 to 8.1 percent in 1958), the ability of railroads to handle a substantial number of additional passengers is

highly questionable. In fact, testimony revealed that many railroads are not now presently able to handle occasional peak movements without borrowing cars from other lines and even then some traffic has had to go by other modes because of lack of railroad equipment.

Freight

As in the passenger field, the railroad industry portion of the total intercity ton-miles in the United States, has declined from 62.4 percent in 1939 to slightly over 45 percent in 1958. This loss has been accounted for by an increase in the percentage, of the total ton-miles, of the motor trucks and oil pipelines, which in the same period have almost doubled their aggregate percentage participation.

Despite this decline in railroad freight ton-mile haulage, the total number of freight cars of all class I railroads has not varied drastically in the past two decades. In fact, there has been a general upward trend, especially since 1950, in aggregate and average tonnage capacities. The retirement of old cars, the rebuilding and modernization of old cars, and installations of new ones, while it has varied from year to year due to changes in traffic and earnings, has not materially affected the total number of cars on hand. The percentage of cars in need of repairs, which as of December 31, 1958, was 7.1 percent, while higher than in any other year since the beginning of World War II, is considerably lower than the 12.8 percent which were in need of repair in 1939.

Due to the fact that shipments by rail of many commodities are seasonal, there exists during the year periods of surplus and shortages in cars. Here again, there has been a great variance from year to year but the amount of variance, in recent years, has been much less than existed at the start of World War II.

All of the above factors, although they may seem relatively unimportant, are considered vital to the existence of a transportation system "in being" which will be able to support the demands placed upon it.

To generally classify railroad feight cars in a group and to thereby draw a conclusion as to adequacy or inadequacy to perform a certain operation, without a concurrent consideration of each type of freight car, could only lead to a wrong conclusion. Because freight cars are generally designed to handle a specific type or group of commodities, they are not readily and in many cases cannot be converted to handle products of another type or group.

Economic necessity has been the factor behind the design of each particular car and it controls the number of each such car in use. The vast bulk of railroad freight business is handled in cars classified as box, gondola, and hopper (including covered hopper), and, according to data furnished the committee, this group represents approximately 91 percent of the total number of railroad freight cars available for use by class I railroads as of December 31, 1958. The remaining 9 percent is divided variously among flat, stock, refrigerator, tank, rack, and "other" cars.

In time of emergency, many items handled today will be considered as luxuries and the cars used to transport them will be available for essential use. In such an event, however, while the number of freight cars in existence may have a ton-mile capacity equal to or even in excess of the total required, many items will not be able to be moved because of shortages in the particular type of car needed.

It is in the area of the 9 percent of freight cars as classified above and in the field of age of freight cars, that there is some concern as to adequacy of equipment. While the average age of all freight cars is 18.9 years, in the area of the 9 percent, the average age is 27.27 years.

Since this is a small percentage of the total ownership, modernization in this field should not be too great a problem if the economic condition of the railroads can be improved to the point where cars can be replaced when they reach a reasonable age.

Motive power

From a system that was almost wholly operated by steampower, the railroads have, in the past two decades, converted almost 100 percent to diesel engines. From a total of 42,511 units of motive power in 1939, there has been a decline to 29,560 in 1958. However, the greater efficiency of this new type of power is reflected in the fact that the active freight locomotive average daily mileage increased from 104 miles per day in 1939 to 141.6 miles per day in 1958. In addition, the net ton-miles per train hour, one measure of efficiency of railroad haulage, has increased slightly more than 100 percent since 1939.

As indicative of the extent of motive power of the existing number of units, it is interesting to note that the average output for 1956, when there were 1,500 fewer diesels owned by class I railroads than today, the average output exceeded the peak output of 1944. The controlling factor in the amount of motive power

that can be called upon is the number of locomotives temporarily out of service for major repairs. When this factor is in proper balance, the railroads should have sufficient motive power for any task they may be called upon to accomplish.

Basically, the railroad motive power situation is satisfactory from the standpoint of age.

Road and track facilities

According to statistics furnished the committee by the Pennsylvania Railroad, the past two decades has witnessed a decline in miles of road and miles of track as well as the number of train-miles operated per mile of track. This is accounted for by a program of road abandonment, undertaken by the railroads to ease their financial plight, which, in the period since World War II, has averaged about 600 miles of road abandoned per year.

Utilization of main line track in recent normal years has averaged about 75 percent of the peak utilization in 1944 and on some rail lines is considerably less, indicating a substantial amount of unused road capacity. While this is tempered to some degree by the fact that increases in traffic loads during wartime, as reflected by past experience, does not occur uniformly on all railroad lines, there should be sufficient road facilities available to handle a traffic increase to mobilization levels.

The hidden factor in this estimate, as in the case of rolling stock, is that of deferred maintenance, a program which exists on the railroads because of their undesirable financial condition. If a program is initiated promptly to reduce this factor and to keep it current, road facilities will be adequate to handle an expanded amount of traffic.

Equipment industry

According to testimony supplied by the Railway Progress Institute, a national organization of the railway equipment and supply industry, the depressed condition of railroad buying in 1958 has enabled the supply industry to devote time and effort to the improvement of its physical plants, with a consequent increase in productive efficiency. As a result, the present physical condition of this industry is excellent and should remain so for the next few years, at least.

WATER TRANSPORT

During 1958, inland water carriers were credited with 8.6 percent of the total intercity ton-miles of freight traffic in the United States. This represented about 106 billion ton-miles of service.

According to testimony supplied by the American Waterways Operators, Inc., it is estimated that the inland water carriers can be expected to increase this amount by 20 percent by 1960 and by an additional 30 percent by 1965.

The combined efforts of Federal, State, and local governments and of private enterprise have provided the means for additional usage of the inland waterways through such things as the deepening, widening, and extension of channels, turning basins and harbors, the provision of new locks at critical places, the expansion of wharfage and the increase of storage facilities.

In view of the above, it appears that the inland waterways are capable of handling a heavier traffic and tonnage demand.

OIL PIPELINES

The network of regulated pipelines transporting crude and refined oil reaches into 43 States and the District of Columbia. The total regulated network comprises 143,235 miles (32 percent more than in 1943); 85 percent of the mileage is in 12 States.

During the past 15 years, the investment in carrier property has more than tripled, from $965 million to $2,949 million. While this increase in investment reflects increased prices for equipment and materials to some extent, there is ample indication of expanded operations by the companies. From 1943 to 1958, the miles of gathering lines increased 17 percent, and the miles of trunklines operated increased 43 percent.

Oil pipeline companies appear to be in sound financial condition. Operating revenues in 1958 were $720.7 million, or 160 percent greater than in 1943. Net income (after taxes) increased from $61.3 million in 1943 and $53.1 million in 1947 to $161.8 million in 1958.

Today, the oil pipelines move one-sixth of the Nation's total intercity ton-miles of freight traffic. Since 1941, the number of miles of oil pipelines has almost doubled. This, however, does not tell the whole story. Before World War II

the biggest line that had been laid was 12 inches in diameter. During the war and since, most of the new trunklines constructed range from 20 to 26 inches and even some to 30 inches in diameter. The construction of larger lines in the post-war period has permitted the building up of spare capacity sufficient to move crude oil from most of the important producing areas.

Automation is being introduced into the field of pipeline operations. By using a combination of a radio network and electronic controls, pipeline operations will become almost automatic.

The capacity of the pipelines for expanded operations and production is unquestioned.

FUEL

Since the percent of transportation, both freight and passenger, which operates on motive power derived from the use of products other than petroleum, is minor, the availability or lack thereof, could be a controlling factor in determining the mode of transportation upon which the greatest burden would fall in event of emergency as it was in World War II. Obviously, railroads and waterways provide more ton and passenger miles per unit of fuel than bus, truck and air services which are relatively high users of fuel.

Inasmuch as the past two decades has witnessed a major change in the percentage of transportation dependence as between the low and the high users of fuel, it is necessary to determine, if possible, whether the ratio of usage which has evolved in our economy can be counted upon to remain constant in a period of mobilization.

If, as is probable, we will be denied imports of crude oil, it is necessary to determine what our status will be in such an eventuality. According to data supplied for use of the committee by the Office of Oil and Gas, Department of the Interior, total imports of crude oil and petroleum products as of August 14, 1959, were slightly under 1.4 million barrels per day. This, compared with domestic production of about 7 million barrels per day, represents an importation of approximately 20 percent of daily consumption.

However, it must be noted that domestic production is below productive capacity leaving a reserve capacity which can be called upon if needed.

In view of what appeared to be changes in the relationships between productive capacity and reserves of petroleum, as obtained by the Office of Oil and Gas (OOG) from a review of reports of the National Petroleum Council (NPC), the OOG, on March 1, 1957, directed the NPC to make additional studies of this problem for use of the Government in its security planning.

By letter dated October 3, 1957, the NPC reported that from January 1, 1951, to January 1, 1957, there has been an increase in productive capacity from 6.7 to 9.8 million barrels per day. As of January 1, 1957, the margin between productive capacity and production was 2.4 million barrels per day. This exceeds our present imports by approximately 1 million barrels per day.

As to petroleum reserves, the NPC reported that these increased from 25,268 to 30,435 million barrels, a ratio of reserves to productive capacity of 8.5 years.

Consideration of additional factors is necessary before a positive conclusion can be reached that the reserve productive capacity will be available for use over an extended period of time. These factors include drilling of additional wells and availability of transportation facilities from the wells to the refineries.

On the basis of experience in World War II, when the drilling of an average of 22,500 wells a year in the period 1942–45 was just sufficient to offset the decline in reserves resulting from production of 4.3 million barrels daily, the NPC estimated that it will probably require 41,000 to 50,000 wells a year to maintain productive capacity at the current level. If there were no drilling, it is estimated that the decline in productive capacity in the first year might be on the order of 0.7 million barrels per day, or about 7½ percent, if production were at full capacity.

The capability of the pipeline industry for expanded operations and production was set forth above.

It would appear that despite the possible loss of imports of crude oil, the petroleum industry has the raw materials available to maintain the present level of production in event of emergency, thus making available for consumption finished products in the volume that they are presently being used.

There is also a capacity for expansion from present levels in the refining industry since, as of August 14, 1959, refineries were operating only at 81.9 percent of capacity.

With improvements in technology and with the more intensive development of proved reserves, the domestic oil industry is enabled to produce its reserves at a higher rate than in World War II.

Transportation Requirements

MILITARY

In a series of executive sessions, representatives of the Department of Defense (DOD), including the office of the Secretary of Defense, the heads of transportation of the various armed services and the Executive Directors of the Military Traffic Management Agency (MTMA), the Military Air Transport Service (MATS), and the Military Sea Transport Service (MSTS) presented the committee with the military requirements of the DOD for freight and passenger transportation under certain hypothetical sets of conditions of mobilization and war. These sessions were necessarily held in executive session and the data supplied therein is not set forth in detail in this report because of the classified nature thereof.

Suffice to say that the DOD and the other witnesses, in a very able fashion, explained the basis for and the manner in which the requirements of the individual services are computed, how they are transmitted to the appropriate Executive Director of transportation and to what extent these requirements will place an added burden on the various transportation systems.

In all of its planning for the use of domestic transportation, the DOD, at time of emergency, will call upon the Office of Civil and Defense Mobilization (OCDM), to assess the military requirements, in light of the overall defense requirements, and to allocate to military usage such transportation as the military needs and/or is available dependent upon the situation at that time.

It can be stated that, from the data secured in these sessions, the requirements of the DOD, developed by the services in support of the approved plans, is considerably less than prior forecasts and appears to be within reasonable limits of the commercial carriers' capability, without a serious disruption of essential civilian activity. The current DOD requirements differ from those stated previously by the DOD to various congressional committees and Government agencies, interested in this problem. The marked differences between the past and today stem primarily from current concepts which provide for changes in force structures and from more refined methods of calculation.

In furtherance of its planning, the DOD has in being today the machinery necessary to initiate instantaneously the permitting and routing of DOD traffic under any conditions of emergency.

CIVILIAN

No determination of the adequacy of domestic transportation systems can be calculated based upon military requirements alone. There must be a consolidation of the military with essential civilian requirements, including those of the war supporting industries.

In furtherance thereof, the OCDM was called upon to inform the committee of the requirements that can be expected to be placed upon transportation by essential civilian movement and war supporting industries. In its capacity as the coordinating body for Federal activities in the event of mobilization, OCDM has the responsibility for determining these requirements.

OCDM called attention to its National Plan for Civil Defense and Defense Mobilization, published in October 1958, and to annex 34 of this document, the National Transportation Plan, published in April 1959. This document establishes the mobilization objective of transportation as one of service to all elements of national defense, including the military effort, essential civil and industrial survival activities and necessary foreign programs.

Under its national damage assessment program, OCDM alleges that it has a fairly comprehensive inventory of transportation which can be machine processed on the basis of any attack pattern on the United States. This will enable it to obtain a quick summary of transport capabilities. Under its program of traffic movement forecasts, OCDM requires the various departments of Government to furnish projected requirements for transportation service in event of emergency. These requirements, including the military, are compared with transportation capabilities to allow for a determination whether there is sufficient transportation to accomplish the task.

The first complete evaluation was expected to be made in the Operation Alert held on July 8–10, 1959. The results of the exercise were not available at the time of these hearings.

Included in its National Transportation Plan, OCDM has a program for the selection and training of "executive reserves," men from private industry and Government who will work together, under the direction of the OCDM, in an effort to assure essential users of the necessary transportation service and support they require.

With regard to the potential users of transportation in wartime, OCDM pointed out that every segment of the national economy likely to have functions during mobilization is represented by a department or agency of Government; that each of these departments or agencies has transportation staff people who plan the movement of the particular commodities with which they are most directly concerned; and that OCDM has worked closely with these offices in establishing procedures for handling emergency shipments. However, OCDM does not have the overall transportation requirements of these claimants.

In its testimony before the committee, OCDM advised that it does not have the full requirements of the civilian economy and the war-supporting industries because it has not been able to secure from all sources the demands that will be placed upon transportation. OCDM further stated that it could not advise as to when it would be in possession of the full requirements because it is dependent upon so many agencies of the Government to get out results.

Concerning its executive reserve program, OCDM advised that it has selected people throughout all of its regions for this program, some of whom do not yet know that they have been selected, that the program is just getting underway and no estimate is presently available as to when this program will be operational.

COMMENTARY

Prior to setting forth our conclusions and recommendations, relative to the problem before us, it behooves us to comment concerning transportation in general.

Transportation is one of the tools required by civilized man to bring order out of chaos. It reaches into every phase and facet of our existence. Viewed from every standpoint, economic, political and military, it is unquestionably the most important industry in the world. You can no more operate a grocery store or a brewery than you can win a war without transportation. The more complex life becomes, the more indispensable are the things that make up our transportation systems.

The history of transportation is the history of adjustment to new situations that are constantly arising in a dynamic economy. Knowing its importance, one would expect that this great industry would be striding forward with giant steps to keep pace with all of the incredible achievements of our times. On the contrary, the picture that emerged from our hearings was one of a plethora of outdated and outmoded equipment, deferred maintenance, inadequate highways, depressed earnings, claims of unfair tax regulations, favored treatment of one mode over the other by subsidization, and the like, all of which reflected an uneviable state us suspended animation, detrimental to the economy and dangerous to the defense of the country.

Each mode of transportation had its complaints, both against competing modes and regulatory practices, and none presented the dynamic outlook and hope for the future that should prevail in this era of fantastic progress. The representatives of each of the modes of transportation devoted much time to indicating why theirs was the best, fastest, most economical in the use of fuel and manpower, and like reasons for indicating that each was the indispensible mode.

Despite the complete reliance of our economy and defense on all modes of transportation in varying degrees, no one deemed it necessary or desirable to concern himself with suggestions that might work to the benefit of all, economic and defensewise, through the cooperative actions of each mode, one with the other.

We do not wish to leave the impression that the fault is all with representatives of transportation. On the contrary, the Government bodies most concerned with the health and economic well-being of transportation showed all too little regard for this situation. They tended, rather, to view the present condition of transportation as adequate to perform the task it may be called upon to accomplish, with some possible soft spots. There was no indication of any new thinking in this field but rather an obvious dependence on past experiences for guidance.

All in all, it was a picture of obsolete equipment, 19th century economics and laws and antiquated thinking.

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Conclusions and Recommendations

Recommendation No. 1

Without the complete transportation requirements of essential civilian and war-supporting industries, it is difficult, if not impossible, to reach an irrefutable conclusion as to the adequacy or inadequacy of the transportation systems. As we have indicated, the military has computed its requirements under certain hypothetical cases. It is reasonable to believe that OCDM, utilizing these same situations, could compute the remaining requirements. Thereafter, these could be compared alongside the capabilities of each mode as reported by them and a total picture obtained.

It is the recommendation of this committee that the Office of Civil and Defense Mobilization immediately set in motion the necessary machinery to compute the essential civilian and war supporting industry transportation requirements, in accordance with the same hypothetical cases utilized by the Department of Defense, and thereafter to maintain them in a current status in accordance with military planning.

Recommendation No. 2

In the absence of total requirements, a conclusion as to possible adequacy of transportation capability will have to suffice. Since the economy of our country in the field of luxuries and pleasure has expanded to such an extent that it now claims a much larger share of the transportation pie than at any time in our history, the discontinuance of such nonessential industry and travel will release for essential use sufficient overall transportation capability to probably support the national defense effort in the event of mobilization, if the emergency is not of long duration. This conclusion is based in part on the fact that military planning, as it is now progressing, based on the data presented at the hearings, could call for considerably less transportation than found necessary in the past to carry out its mission, due to changes in force structures and the lack of need for a large buildup of stockpiles of equipment.

Recommendation No. 3

Despite the probable adequacy of overall capability, it has been determined that in certain selected types of transportation, according to the hypothetical situations envisioned by the military, there may be shortages due to the lack of sufficient specialized equipment. It can be presumed that in the essential civilian and war supporting industry requirements for transportation these shortages will likewise appear. Appropriate representatives of the various modes of transportation wherein these shortages are likely to be found have been notified by the Department of Defense relative to its dependence on these modes and the degree thereof on each type of equipment. It is imperative that action be taken to alleviate these shortages in order that we will not be caught unprepared. According to testimony received by the committee, the main reason for such shortages is financial. Many suggestions were offered for relief of this situation which should be given serious consideration. The main suggestions were as follows: (*a*) Change from Department of Defense policy of utilization of the lowest cost mode of transportation commensurate with the service requirement to utilization of each mode of transportation in the ratio it would be relied upon in time of emergency; (*b*) discontinuance of the use of military equipment for the movement of air freight and passengers and releasing this business to the appropriate air carrier; (*c*) fully self-liquidating Federal equipment plan to lease rolling stock to the railroads; (*d*) change in law regarding agricultural commodities' exemption (either eliminate the law or make all carriers subject thereto); (*e*) change in depreciation allowance for rolling stock, equipment, and fixed facilities of the railroads; (*f*) establish provisions for a construction reserve; (*g*) Government loans for development and construction of adequate air-cargo capability; (*h*) tax relief—Federal, State, and local.

Concerning these suggestions, the following recommendations are made:

(*a*) The policy of the Department of Defense of procuring the lowest cost mode of transportation commensurate with the service requirement and of not according preferential consideration to one mode of transportation as against another in the routine procurement of transportation services, is in accord with a reasonable interpretation of the Armed Services Procurement Act and in consonance with the national transportation policy.

In view thereof, and in light of the transportation requirements of the DOD as computed within certain hypothetical cases, it is not believed that this policy should be changed and no change is being recommended.

(*b*) The suggestion to discontinue the use of military equipment for the movement of air freight and passengers, thus releasing this business to the appropriate air carrier, strikes at the very heart of the Military Air Transport Service activity. Use of domestic air service is not involved.

This matter has been aired at numerous hearings by congressional committees. The Subcommittee for Military Operations of the House Committee on Government Operations conducted its latest hearing into this matter on May 11 through 14, 1959, and, as set forth in House Report 1112, 86th Congress, 1st session, it reaffirmed the recommendations made in its first report (H. Rept. 2011, 85th Cong., 2d sess.).

(*c*) This is in line with the provisions of H.R. 1365, introduced on January 7, 1959, which was referred to the Committee on Ways and Means. It is the recommendation of this committee that the Committee on Ways and Means give early consideration to H.R. 1365, acquaint itself with this report and the data developed in these hearings.

(*d*), (*e*), (*f*) It is the recommendation of this committee that since these suggestions are within the jurisdiction of the House Committee on Interstate and Foreign Commerce, the committee and the Interstate Commerce Commission, within the scope of the latter's authority, should give serious consideration thereto in line with the declaration of the national transportation plan of providing "* * * for fair and impartial regulation of all modes of transportation * * * to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail * * * adequate to meet the needs of the commerce of the United States, of the postal service, and of the national defense."

(*g*) Concerning the matter set forth in this suggestion, there has been much activity on the civilian and industry level. As indicated above, the Federal Aviation Agency recommended the issuance of Government guaranteed equipment loans for the procurement of suitable air-cargo capability, it "being in the national interest." On August 19, 1959, the Civil Aeronautics Board addressed a letter to various segments of the civil air transport industry seeking their views on this question. On September 1, 1959, a conference was held between the CAB and those representatives of the industry who wished to be heard.

As set forth in the record of that conference, the CAB and the FAA have been working together in the drafting of a guaranteed equipment loan bill to be presented to the Congress. The CAB, in anticipation of being requested to testify at hearings on the bill, desired to have the views of industry in connection therewith. The CAB hearings produced a divergence of opinion within the industry as to the need for such loans.

It was not the purpose of this committee to inquire fully into the manner of developments of this nature and no effort was made in that regard. However, inasmuch as it is apparent from these hearings that there is a national defense need for the development of additional air-cargo capability, it is the recommendation of this committee that such action as may be deemed most suitable be taken by industry and/or Government to develop this capability.

(*h*) This suggestion has considerable merit and potential for immediate financial relief within the transportation industry. This is particularly true in the case of the railroads, for that segment of the industry, except for the pipelines, is alone in providing and maintaining its own rights-of-way. The railroads also provide their own terminals and other fixed facilities as do some other segments of the transportation industry.

In all these fertile areas for taxation by governments, Federal, State, and local, are taxed to the extent that the levies placed thereon have become an oppressive burden operating to the detriment of the railroad industry in particular and to the economy in general.

In hearings by the ICC beginning in March 1956 relative to the railroad passenger deficit, the matter of such taxation, as it affected the whole of the railroad industry, was fully explored. On May 25, 1959, a report was released by the ICC which contained, in addition to others, the following recommendations:

(1) That Federal tax laws be amended to encourage local and State tax relief, at least to the extent of disregarding State- and local-provided "pretax net income" for Federal tax purposes.

(2) That State and local governments take such steps as may be required to effect a greater degree of equity in respect to tax burden on railroad property in relation to taxpayers generally and consistent with the desire of their communities for retention of commuter and other passenger train service.

The committee is in agreement with these suggestions and recommends prompt action by those having responsibility therefor.

Recommendation No. 4

There was demonstrated in these hearings an obvious urgent need for a National Traffic Control System, in being, staffed by officials in Government and in the transportation industry, who will work together and be ready to operate in time of emergency on a national and regional level. The Military Traffic Management Agency advised that it has the machinery for such an organization in the realm of its responsibility and that it has been tested. The OCDM has such a plan in its executive reserve but this plan, on a national and regional level, has not been fully implemented or tested. It is the recommendation of this committee that a National Traffic Control System be established on a civilian level, that it be implemented on a permanent basis by the OCDM, tested and in a position to be augmented by its executive reserve plan in event of an emergency.

Recommendation No. 5

It is obvious from the testimony received in these hearings that the policies of the Federal and State Governments in providing roads, air terminals, waterways developments, and other means of assistance to transportation, have operated to the advantage of those forms of transportation, which advantages are not available to the railroads.

It is noted that the House Committee on Interstate and Foreign Commerce has, by reason of its jurisdiction, a continuing interest in the national transportation situation. The contents of this report and data set forth in these hearings are recommended to the consideration of the House committee.

Recommendation No. 6

In addition to our recommendations for consideration by the Government of measures which would aid the financial position of the various modes of transportation, it is also recommended that the carriers look to means available to them, and not look just to the Government, in this regard.

In the case of the railroads much could and should be done by them in initiating proposals for their own assistance, such as, consolidation of roads and traffic which would eliminate duplicative facilities. The use of more highly mechanized track maintenance, motorized freight handling and more extensive centralized traffic control should be instituted as soon as possible. Coordination of transport operations among carriers of different modes, such as is represented by "piggyback" and "fishyback," in which containerization plays a major role, should be of prime consideration in this regard.

In all of this, the railroads should take a long, hard look at the "why" of their present position. While their arguments as to the reasons for their poor financial condition are unquestionably valid to the extent to which they effect this situation, much can be said for the fact that railroad traffic has been in decline ever since the invention of the pneumatic tire. The ability of other modes to gain business, formerly held exclusively by the railroads, is evidence sufficient of itself to indicate a much deeper seated reason than those generally set forth.

Concerning the modes of transportation other than the railroads—airlines, motortrucks and water transport—all of which are the recipients of major assistance by the Government, as noted herein before, they should show more aggression in building up their resources in line with the national need. Because of the assistance currently being afforded these modes by the Government, their responsibility to be prepared to assist to the utmost, in a period of national emergency, is greatly enhanced. Failure to accept this responsibility promptly could result in Government action to assure compliance.

Approved unanimously by the subcommittee October 10, 1959; ordered printed and published.

PAUL J. KILDAY,
Chairman, Subcommittee on Transportation.
CARL VINSON,
Chairman, Armed Services Committee.

Approved October 10, 1959.

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

WEDNESDAY, JULY 15, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10 a.m., Hon. Paul J. Kilday, chairman of the subcommittee, presiding.

Mr. KILDAY. The committee will be in order.

Today we begin an inquiry into the adequacy of transportation systems to support the national defense effort in the event of mobilization.

While it is agreed that transportation did an outstanding job of fulfilling its mission in World War II and Korea, it has become a matter of grave concern whether it is capable of doing as well under conditions which might arise in view of the changing character of mobilization concepts.

At the outset, I would like to emphasize that these hearings are in the nature of a study and are not based on any existing or planned legislation. Whether the outcome will suggest or indicate the need for any legislation will have to be demonstrated. It will, in the main, depend on what we learn from the various witnesses as to the demands that will be made upon the transportation systems in the event of mobilization and whether these systems will be able adequately to satisfy these demands in the manner necessary to a successful support of the national defense effort.

Transportation systems, like the circulatory system of the human body, will have only as much reserve capacity and degree of adaptability as might logically result from the extent of usage. Since all parts of the system contribute to the whole, the entire structure will be no healthier than its weakest section. It is our purpose to determine whether there are any weak links.

The fact that we had time to prepare and to build up our transportation capacity in previous conflicts is no assurance that the same period of grace will be extended to us again. In fact, the reserve is perhaps more in line with probability.

Therefore, it behooves us to be prepared to meet this situation by providing a posture that will, to the best of our efforts, be adequate in the event of a future conflict.

In indicating the avenues of exploration which the committee intends to go into, I do not intend to limit or define the range of interest which may be desirable or may develop in the course of this inquiry. Also, since past actual experience in transportation mobilization has

been on the basis of freedom from attack, consideration of this problem must now take into serious consideration the possibility of direct attack and plans made for new military hazards.

We must first of all determine the present status of domestic transportation systems—are they sound physically and economically? In order to do the job expected of it, it must be and continue in a healthy condition. In this context will be included rail, truck, air, and inland waterways as well as the condition of their equipment, terminals, rights-of-way, etc.

Do Government regulations and controls effect the economic health of the various modes of transportation favorably or adversely? Do such controls allow them to expand and develop to meet newer needs?

Obviously, in order to determine whether our systems of transportation will be able to do the job they will be called upon to perform, it will be necessary to know what that job is expected to be.

We have, therefore, requested the various Government agencies that will most directly be involved in mobilization and defense operations to appear and testify concerning their thinking along these lines. They have been asked to discuss such matters as established plans and policies for transportation needs, priorities for use, needed structural changes in present equipment, consideration given to possibility of damage from attack, availability of manpower and materiel, stockpiling, and any other items which would assist the subcommittee in its deliberations. In light of the data obtained therefrom we will ask the carriers concerned whether they are now or can expect to be able to do that job.

As I have stated, our considerations and experience in the past, from the standpoint of transportation, have primarily been concerned with the movement of troops, supplies, and equipment and the tools of war as well as the continuation as nearly as normal of the economic development of our country. For all of this, we were allowed the important element of time to build our capacity to transport.

Today, with the changing concepts of conflict due to spectacular developments in nuclear capability and weapons delivery capacity, we have reached a new plateau in defense planning. With the desolation and fallout that will accompany the use of these new weapons, we must accept the harsh reality that we may not have time and that our planning must of necessity be concerned with such things as evacuation and resettlement, aid to damaged areas, travel into and through areas of fallout, resupply of military bases, restoration of utilities, and the supply of the most basic elements necessary for survival.

Only the foolhardy would believe that such a situation is improbable and we, in a position of responsibility, will neglect to the peril of all, the means to supply these necessities.

We are very pleased this morning to have as our first witness in connection with this study the Honorable John J. Allen, Department of Commerce.

We are glad to have you with us. Of course, we don't often have witnesses such as the Under Secretary of Commerce here. We are glad that it is a former colleague who, as our first experience, comes to us.

Mr. Secretary, we will be glad to have whatever you desire to present.

Mr. ALLEN. Thank you, Mr. Chairman.

I will say, before I enter into the formal statement, it is a pleasure to be back in this room. I have enjoyed a great many pleasant occasions here, particularly with another former colleague whose picture is up there on the wall.

Mr. Chairman, I would say, further, I have a rather lengthy prepared statement. It was a rather big subject. In it is incorporated information that has been furnished to us by the Federal Air Agency, by the Army Engineers, by our constituent agencies in Commerce, Maritime Administration, the Bureau of Roads, and the Defense Air Transportation Administration. I believe those agencies are all represented here for more detailed inquiry, if that is required.

I would propose to read the statement, if that is agreeable.

Mr. KILDAY. You go right ahead, Mr. Secretary.

STATEMENT OF THE HONORABLE JOHN J. ALLEN, UNDER SECRETARY OF COMMERCE

Mr. ALLEN. Mr. Chairman and members of the subcommittee, I appreciate the invitation extended to me by your chairman on June 8, 1959, to provide information for your inquiry into the adequacy of transportation systems in support of the national defense effort in the event of mobilization.

Before proceeding further, I should like to make an explanation regarding the responsibility of the Department of Commerce in the transportation field. I feel sure that many of you here have heard this before but I believe that it deserves repetition.

The Secretary of Commerce is the principal adviser to the President on transportation matters. The Under Secretary for Transportation is the principal transportation officer in the Department charged not only with the supervision of the transportation agencies in the Department but with the responsibility for appraisal of all transportation policy. It is the function of the Department to determine the effectiveness of the promotional, regulatory, and procurement programs of the Federal Government so that a reasonable policy may be developed and the sound development of our transport is assured in order to meet the needs of commerce, the postal service, and the national defense. Additional areas in which we must advise on policy are those with respect to the impact of taxation and labor-management relations.

The transportation mosaic is a pattern of carrier and Government agencies that must be dealt with together with the property interests involved. Railroads, motor carriers, freight forwarders, and pipelines are operated by private industry, whereas the highway network is fostered and promoted by the Federal, State, and local governments. The inland waterway carriers and ocean shipping are operated by private industry, whereas the construction, maintenance, and operation of the waterways and ports are generally fostered and promoted by Government. Air carriers are operated by private industry, and airways and airports are a Government responsibility. Factors of Government responsibility affecting our transportation industry are regulatory, promotional, procurement, labor, and taxing policies. These policies are developed and promulgated by a variety of Government agencies.

Thus the Department, as the catalyst, must develop a reasonable transport policy to insure that our expanding Nation, population, and

economy will have, at all times, adequate transportation facilities to produce the necessary passenger-miles and freight ton-miles to meet national and regional needs of our commerce, postal service, and the national defense. Stated differently, the primary concern of the Department is the health of the transportation system.

If the transportation plant is kept financially and physically healthy, the agency charged by law with the responsibility for mobilizing the diverse elements into a war transport machine should be able to support a war effort of considerable dimension.

The health of our transportation, not its mobilization, is our task. It is my understanding that the mobilization of the transport industry will be the subject of testimony by the Office of Civil and Defense Mobilization. The transport of the Nation in the peak of condition could undoubtedly support our military effort in an all-out conventional war for a protracted period. No more abundant proof is necessary than World War II. Obviously our transport system is now in a condition to support a war less than all-out conventional war.

Massive large-scale nuclear attack on this Nation could certainly immobilize our transport regardless of its condition. Irrespective of the condition of our transport system at the time of a massive nuclear attack, a reappraisal of the damage done nationally would be imperative before a determination could be made of the available capacity to meet local and national transport needs.

My statement deals in large part with the present state of the national transportation system as one of the best indicators of transport adequacy in support of the national defense during an emergency. Because of the character of the responsibility of the Department, it will be general in nature. The Government agencies that are responsible for the activities involving the various elements in our transport network will supply you with the details of their respective areas.

My statement is directed to the elements of transport using land, water and air.

I shall discuss generally the (*a*) manpower situation, (*b*) materials and components of construction, maintenance, repair and operation, and (*c*) fuel availability.

Measures of national growth: The broad expansion of the Nation in the past two decades is readily shown from basic economic indicators. Today the population of the United States is 176½ million, compared with 131½ million and 150½ million in 1940 and 1950, respectively. In constant 1954 dollars, gross national product increased from approximately $206 billion in 1940 to $318 billion in 1950 and to an estimated annual rate of $418 billion in the first quarter of 1959. The Nation's civilian labor force employed in May 1959 aggregated 66 million, compared with 47½ million in 1940 and 60 million in 1950.

With specific reference to the expansion in transportation capacity and output to keep pace with this rapid growth in the economy, it is significant, first, that the railroad industry, and the transportation industry other than rail, respectively, are currently making new plant and equipment expenditures at rates slightly in excess of $1 billion and $2 billion annually. By comparison, these two groups expended only $280 million and $365 million in 1939. Part of this increase is, of course, accounted for by changes in the price level.

Excluding Alaska and Hawaii, today we have in excess of 4 million miles of railroads, highways, inland waterways, airways, and pipelines. In 1940 total mileage was approximately 3.4 million.

Total transportation output, as measured by intercity ton-miles, rose from 618.6 billion in 1940 to 1,352.1 billion in 1957, or 119 percent. Gaged by intercity passenger-miles, the greater part of which is private automobile traffic, the increase was from 284 billion in 1940 to 719 million in 1957, or 1,953 percent. That one probably should have been billion instead of million.

The annual peak World War II ton-miles amounted to 1,088 billion and the peak passenger-miles totaled 305.7 billion.

Land transport—Railroads: No Government plans for transport development can fail to take into account the railroad industry. Railroads still carry more freight ton-miles than any other mode. They are important passenger carriers, with a high potential for the future in certain areas.

Since the end of World War II, the number of freight-train cars has undergone some decline—from 1,812,000 in 1945 to 1,798,000 in 1957. The number of locomotives has shown a greater degree of decrease, from 46,000 in 1945 to 32,000 in 1957. Many of these locomotives, however, are newer diesel models, with more tractive power than the steam locomotives which predominated in 1945. Passenger train cars have declined from 39,000 in 1945 to 30,000 in 1957. Railroad employment has fallen from 1.5 million in 1945 to only 1.06 million in 1957.

Statistics of the Interstate Commerce Commission for the year 1957 show 111 class I railroads representing about 95 percent of all railroad mileage in the United States. They had a combined net investment of $26 billion in carrier property. They operated a total mileage of 219,067. Their net income after taxes and interest on long-term debt totaled $734 million or 2.8 percent on net investment. The operating ratio of expenses to revenues was 78.4 percent.

With fewer cars and locomotives and with improved line and terminal capacity the railroads are increasing their efficiency to handle the movement of freight. One measure of such efficiency is the volume of net ton-miles per freight train-hour. This factor has increased nearly 60 percent since 1945. It is more than double the prewar figure and nearly three times the average during the 1920's.

Railroad capacity may be measured in two ways. We may think of the capacity of basic line and terminal facilities to handle volumes of cars and locomotives. On the other hand, we may think of capacity as the numbers of cars and locomotives available to meet the demand for service. Most of the attention given to railroad capacity is focused on the latter consideration, particularly the problem of railroad car shortages. It should be realized, however, that a fundamental aspect of railroad capacity—namely, the line and terminal facilities—has a bearing on the problem of car shortages. More modern line and terminals enable a faster turnaround of equipment, particularly under emergency conditions. They enable the use of heavier and larger cars and locomotives. During the 1920's, for example, car ownership was one-third greater than today or during World War II. Yet no one would argue that our railroad capacity today is one-third less than the capacity of the 1920's. The point I am making is this: Railroad capacity is a combination or resultant of the basic capacity of the line and terminals and the available equipment.

From the standpoint of defense transportation, there is one other important consideration, the amount of surplus that is available over and above the needs of the general economy.

Since World War II the railroads have increased the basic capacity of their line and terminals in a number of ways. They have increased the average weight of rails and the other elements which allow the carriage of heavier loads. They have installed additional miles of centralized traffic control and other systems which enable trains to move more frequently and with less interruption over a given line. They have built or modernized classification and terminal yards, permitting trains to be assembled and classified in greater volume and at faster rates. All of these basic improvements allow for heavier and longer trains which can run, if necessary, at more frequent intervals. The result has been a large increase in basic plant capacity over that of World War II or any previous period.

This brings us to a fundamental problem of defense transportation. Can the great increase in railroad efficiency provide a surplus for use in time of war in spite of the decline of rolling stock and railroad employment? The economy generally is operating at a higher level than in 1940, just before World War II. Even in the slack year 1958, the railroads performed twice the volume of ton-miles of the 1930's. The 1958 freight volume was even 25 percent higher than the prosperous period of the 1920's when railroads still enjoyed a practical monopoly of intercity service.

This problem can be stated by means of another comparison. The peak World War II railroad freight traffic, stated in ton-miles, was 120 percent greater than the average traffic of the 1936–40 period but only about 20 percent higher than the level of traffic in the 1950's.

Although the railroad plant has been expanded in the postwar period to handle a year-to-year volume of traffic much above the pre-World War II level, rail capacity to meet a great expansion in event of emergency is less than in the case of certain other modes of transportation.

Motor carriers: Today, nearly one-third of the total intercity motor traffic is carried by the regulated industry with approximately 200,000 vehicles—about 2 percent of the total 11 million trucks. Bureau of Public Roads studies show that three-fourths of all the ton-miles performed in intercity truck traffic are carried in truck-trailer combinations. There are in the United States about 600,000 truck-tractors of all types of ownerships. In other words, 5½ percent of the Nation's motive power units have the capacity to carry 75 percent of total intercity ton-miles by motor vehicles. This fact has an enormous significance in planning for the allocation of resources to motor transportation. It indicates that a relatively small percentage of resources might meet a greatly increased demand for wartime transportation.

Many efficiency factors in the commercial motor carrier business are showing gains. Employees per power unit have decreased substantially since World War II; more powerful and efficient engines have lowered fuel consumption per ton carried; better highways yield faster turnaround of equipment; an increasing ratio of trailers to tractor units indicates more possibilities in the utilization of motive power and motive power personnel; and increasing terminal efficiency adds more capacity to trailer and motive power inventories.

Today the intercity bus industry carries about 30 percent of the passengers in public intercity transportation. This amounts to 25 billion passenger-miles annually, a figure somewhat lower than the peak demand of World War II. This carriage is accomplished by

about 25,000 vehicles. About 85 percent of the intercity bus passengers are carried by class I carriers in about 12,000 vehicles. These figures indicate clearly the potential of buses for meeting our wartime transport needs with a minimal use of resources.

Limitations on utilization of the enormous capacity of the motor transport industry will stem from the imposition of controls on fuels, vehicles, tires, and manpower.

The decline in rail passenger capacity will impose a greater burden on this industry. Some evidence of expansibility is apparent in the fact that even in World War II, the regulated motor carrier industry maintained its traffic volume in the face of attrition of equipment.

Statistics of the Interstate Commerce Commission for the year 1957 show 836 class I motor carriers of property. Their net income after taxes was $61.9 million. Their operating ratio was 96.8. In addition to the class I carriers there were 16,379 class II and III carriers regulated by the Commission but not reporting in detail.

The Interstate Commerce Commission data for the year 1957 also show 148 class I carriers of passengers with net income after taxes of $16.9 million and an operating ratio of 91.2. In addition to the class I carriers there were 1,010 class II and III carriers regulated by the Commission but not reporting in detail.

Highways: Except for Alaska and Hawaii, there are today approximately 3,453,000 miles of highways in the United States compared with 3,017,000 miles in 1940. About 700,000 miles of this comprise the Federal-aid systems, divided into four categories—the Interstate System, the primary, secondary, and urban highways—the latter three systems referred to now as the ABC program. The National System of Interstate and Defense Highways is a planned, integrated network of the Nation's most heavily traveled route connecting the country's metropolitan areas and industrial centers serving the national defense and connecting with routes of continental importance in Canada and Mexico. It was created by the Federal-Aid Highway Act of 1944. The general location of 37,700 miles of city-to-city routes was officially designated in 1947 and 2,300 miles of the routes into, through, and around cities were designated in 1955. The Federal-aid Highway Act of 1956 provided a 1,000-mile increase in the limitation of the Interstate System bringing its total extent to 41,000 miles. The 41,000 miles comprising the National System of Interstate and Defense Highways account for about 60 percent of the expenditures on the Federal-aid program now underway. Included in the Interstate System are nearly 2,300 miles of toll roads.

Since July 1, 1956, construction has been completed on over 73,000 miles of Federal-aid highways, including 14,500 bridges.

On the regular primary, secondary, and urban Federal-aid system (generally referred to as the ABC program) progress is equally impressive. Since July 1, 1956, 61,000 miles have been completed and construction is now underway on 30,000 additional miles.

Employed on our Federal-aid highway system are nearly 6,000 highway contractors with their construction equipment and over 350,000 pieces of major equipment are at work on the program to improve our highway network.

The manpower problem, while causing difficulty in the beginning, has to a great extent been resolved.

This highway system is designed to meet the requirements of modern America which by the end of this year with the 70 million automobile vehicles will have recorded nearly 700 billion vehicle-miles of traffic.

Highway transportation appears to have suitable capability for meeting expanded transportation needs.

Freight forwarders: According to the Interstate Commerce Commission, about 80 freight forwarders are actively engaged in service under permits issued by the Commission. Between 55 and 60 of these are class A, or companies having gross annual revenues of $100,000 or more. In 1958, some 56 class A forwarders reported gross revenues of $413 million. These companies handled 23 million shipments with an aggregage weight of 4 million tons.

Statistics of the Interstate Commerce Commission show that in 1957, 63 freight forwarders out of a total of 87 forwarders reporting to the ICC had a net investment in transportation property totaling $3.7 million and in nontransportation property of $900,000. Net income amounted to $4 million. The ratio of operating expenses to operating revenue was 93.4 percent.

Essential to the performance of the coordinated services of freight forwarders are their freight stations, where freight is assembled, consolidated, and transferred from one mode of carriage to another. I am advised that one or more forwarder freight stations are located in more than 250 cities throughout the United States. These stations are, for the most part, on railroad properties, and are leased or rented from railroads. They must, of course, be readily accessible to large-scale motor operations, and I am advised that they are being increasingly located at points outside of the congested areas of cities.

The physical handling of forwarder freight is accomplished partly by the forwarders' own forces, and partly by persons who are employed by or are under contract with other carriers. Freight forwarders report to the ICC an average of 12,000 to 13,000 employees, about half of whom are station and warehouse employees. While forwarders do not have as wide a range of employees, in terms of occupation, as do the direct carriers, they have, in times of crisis in the past experienced the same difficulties as other carriers in maintaining an adequate force of skilled personnel. In the executive, managerial, supervisory, and technical field, freight forwarders—like others—have key employees whose adequate functioning depends upon years of experience and training.

I have no information to indicate that at the present time forwarders are experiencing any difficulty in obtaining and retaining adequate workers and skills necessary to the efficient performance of their services.

Since one of the basic functions of freight forwarders is to consolidate shipments into more economic units of haulage, they tend to increase the capacity of the transportation system by heavier loading and more efficient utilization of equipment. An example that has been directed to my attention is that under rail piggyback plan III, forwarders furnish their own trailers, and under plan IV they furnish not only their own trailers but their own flatcars. The claim is made, and I have no reason to doubt it, that because of the 100-percent load factor guaranteed to the railroads under these two plans, the reduction is switching the faster turnaround time, and other factors, each piggy-

back car tendered by forwarders to the railroads releases three rail boxcars for other use.

The forwarding industry appears to be in condition to meet demands imposed by an expanded level of traffic.

Pipelines: Today, the oil pipelines move one-sixth of the Nation's total intercity ton-miles of freight traffic.

In 1941 there were 127,351 miles of oil pipelines. At the end of the war the figure had increased to 142,000. Now there are approximately 200,000 miles of lines. During the period covering 1946–58 the pipeline industry constructed 29,941 miles of crude lines and 26,792 miles of products lines, a total of 56,733 miles.

The large increase in the number of miles of pipeline tells only one part of the story. Pre-World War II, the biggest line that had been laid was 12 inches in diameter. The requirement of the war for moving unprecedently large volumes of crude oil and products forced the development of pipe, construction techniques and pumps for larger capacity lines. As a result, during the war and since, most of the new trunklines constructed range from 20–22–24–26 and even to 30 inches in diameter. This pattern of pipeline transportation provides such transportation to major refineries situated in close proximity to heavily populated and industrialized cities where the products are fanned out by short haul truck transportation. Some 22 Air Force fields are connected with pipelines which bring in their fuel supplies.

The crude lines are the principal means of delivering domestically produced crude oil to U.S. refineries, while products lines deliver more than 41 percent of the demands for light refined oils.

During 1958, the total domestic crude oil receipts at our refineries by all modes of transportation averaged 6,654,000 barrels per day. Of this amount, the pipelines delivered 5,608,000 barrels daily, or 85 percent. In addition, about 942,000 barrels per day of imported crude oil were delivered to refineries in this country, principally by means of tankers from foreign areas. In time of war, if the bulk of imported crude ceased and could be replaced by increased production in American oilfields, this would result in greatly increased dependence on pipelines. Since the capacity increases by the cube of the diameter of the pipe, the construction of larger lines in the postwar period has permitted the building up of spare capacity sufficient to move crude oil from most of the important producing areas.

Statistics of the Interstate Commerce Commission for the year 1957 show that 82 interstate pipeline companies, representing about three-fourths of the total mileage of all oil pipelines in the United States, had a combined investment in carrier property of $2.8 billion. They operated a total mileage of 145,236. Their net income, after taxes and interest on long-term debt, totaled $159.2 million.

The ratio of operating expenses to operating revenue for the reporting pipeline companies, before taxes, was 52.97 percent.

Automation is being introduced into the field of pipeline operations. By using a combination of a radio network and electronic controls, pipeline operations will become almost automatic. The microwave with a large number of circuits is an important recently developed aid in remotely controlled operation.

The pipeline industry appears to have suitable capability for meeting expanded transport needs.

Water transport. Ports: With respect to the current ability of America's deepwater ports to meet the demands of war it can be stated that our present transshipment capacity considerably exceeds that available during World War II. This is true without taking into consideration the significant additional capacity now available within the Great Lakes.

No great concern need be felt in at least matching World War II port transshipment achievements during any future international emergency which does not involve the destruction of the ports. This reflects past experience in Federal control of freight movements to ports, continuing improvement of cargo handling techniques, and currently planned control of port utilization in general.

At present we have 90 ports or port complexes with 20-foot depth or over, able to accommodate oceangoing vessels and to handle general cargo. These are distributed as follows: Atlantic coast, 33; gulf coast, 20; Pacific coast, 25; and Great Lakes, 12. The Atlantic, gulf, and Pacific coasts have, respectively, the following number of "major" ports based on capacity for handling general cargo tonnage: 11, 1, and 9.

Increases in port capacity may be shown specifically as follows: During the period 1946–55 port capacity increases over 1945, as measured by berth capacity created by new construction, were as follows: Atlantic coast, 13 percent; gulf coast, 27 percent; and Pacific coast, 25 percent. It is estimated that by 1960 the increases over 1945 will have risen to 20, 44, and 42 percent, respectively. All of these data refer to new construction and do not reflect any additional capacity created by modernization of existing facilities. The data exclude military-owned facilities.

The substantial capacity of U.S. port systems and facilities and the widely separated locations of our port areas and outport facilities gives hope that even under a nuclear attack outloading capacity might remain to support oversea military operations.

Coastwise and intercoastal and ocean shipping: The Government took over all vessels in the coastwise-intercoastal trade during World War II, and the inland carriers, principally the railroads, absorbed the domestic traffic formerly carried by sea. After the war, domestic operations were gradually restored with warbuilt ships either purchased or chartered from the Government. The warbuilt ships which found their way into the bulk trades, especially petroleum, were types which have in general proved competitive in the postwar transportation economy. Those which went to the break-bulk operators were basically standard dry-cargo ships, designed primarily for use in foreign commerce of the United States and the war effort, and have turned out to be considerably less successful in recovering the prewar traffic than have the bulk carriers. As a result, the break-bulk operators now, as in 1939, are in a considerably less favorable economic situation than is the case of the bulk operator.

Since 1939 the deadweight tonnage in the domestic dry-cargo ship fleet has declined nearly 60 percent as compared with the tanker tonnage which has increased by some 35 percent. The prewar passenger ship fleet has vanished from both the coastwise and intercoastal trades.

Traffic figures indicate that the decline in dry-cargo tonnage has occurred primarily, if not wholly, in break-bulk dry-cargo trades

where rising costs, particularly in loading and discharging the ship, have largely eliminated the so-called inherent economic advantages of ocean transport. In short, the crux of the coastwise-intercoastal shipping problem is in the break-bulk dry-cargo trade. The reestablishment and preservation of this segment of our merchant marine can prove a vital national asset in many ways. First, it would have the effect of increasing our national shipping capability and defense posture through a domestic industry not directly under the economic pressures of foreign competition. Further, an economically sound low-cost domestic fleet will continue to make important contributions to the economic growth and development of the United States as a whole and a balanced national transportation system in particular.

The level of shipping services to Alaska and Hawaii where competition from overland types of transport either is nonexistent or (as in the case of Alaska) ineffective remains satisfactory. The maintenance of essential shipping services to these areas in wartime would be a problem of the highest priority.

The coastwise and intercoastal shipping industry is not in condition to contribute to expanded transport needs.

The Nation's ocean shipping capability to meet the requirements of a full-scale war is unquestionably inadequate. This statement is based on a report prepared by the Joint Maritime Administration-Navy Planning Group, dated May 1, 1959, which related the estimated logistics requirements of the Joint Chiefs of Staff to currently available ocean shipping under U.S. control.

Current deficiencies are both quantitative and qualitative and exist, in varying degree, with respect to all three major categories of ships; namely, passenger transports, dry-cargo ships, and tankers.

The most serious numerical deficiencies under conditions of full-scale war exist in the dry-cargo ship category. The initial deficit of this type vessel is estimated to be in the neighborhood of 200 notional ships and will progressively worsen in subsequent months of all-out war.

With respect to the requirements for tanker tonnage, a full-scale war occurring within the next 2 years would find us with a serious deficit in our tankship capability. It is estimated, however, that currently scheduled tanker construction is adequate to overcome this shortage by the end of the fiscal year 1962.

Numerically, there now exists a deficit in passenger transport capacity to meet ultimate military requirements. This deficit is not, with respect to troop lift capability, considered critical. However it must be emphatically stated that there are serious qualitative deficiencies in our available transports, particularly with respect to their speed. This is illustrated by the fact that only 16 of the 159 actual ships in this category are capable of speeds of 20 knots or more. Vulnerability to submarine attack is significantly and progressively reduced as sustained speeds of 25 knots and above are attained. Today only three U.S. passenger ships are capable of this performance.

The determinations presented here as to our ocean shipping capabilities, or inadequacies, with respect to requirements for a full-scale war have included consideration of all tonnage under U.S. control; i.e., our active commercial fleet, our national defense reserve fleet, and those U.S.-owned ships under so-called flags of convenience which are deemed to be under "effective U.S. control." Any dimi-

nution in the quality and quantity of these vessels has the effect of further reducing our capability or increasing our deficiency, as the case may be.

The Joint Marad-Navy Planning Group report previously referred to contains a number of recommendations considered to be the minimum essential steps necessary to maintaining at least our present ocean shipping capability. Such steps would, however, also have the effect of offsetting to some degree a portion of the deficits mentioned. Primary among these recommendations are the following:

(*a*) Increases the strength of the subsidized fleet to the limits permitted under existing statutes.

(*b*) Proceed with the construction of the two superliners authorized by the 85th Congress.

(*c*) Keep the priority list of reserve fleet ships in a full state of preservation.

Inland water transportation—Rivers and harbors: inland waterway mileage authorized for improvement is today 28,400 compared with an estimated 27,000 or 28,000 in 1940.

Approximately 22,500 miles of inland waterways have actually been improved by the Government. Most of the commercial river traffic centers in the Mississippi system and adjacent waterways on the gulf coast, although several rivers flowing into the Atlantic and Pacific account for substantial volumes of freight.

For the Mississippi River system as a whole, and including the Gulf Intracoastal Waterway, total barge carrying capacity increased over 100 percent between 1948 and 1957, and horsepower of towing units rose by almost 40 percent. Average dry-cargo barge and scow capacity increased 17 percent; average tank barge capacity 37 percent; and average horsepower per towboat 66 percent.

At present the total fleet of inland waterway equipment consists of 4,055 towboats, 12,592 dry-cargo barges, and 2,224 tank barges.

Net waterborne commerce of the United States, including not only all domestic river, lake and coastwise traffic, but also import and export traffic, aggregated 1.1 billion short tons in 1957. The amount which may be characterized as inland waterway traffic (excluding the Great Lakes) totaled 392 million tons. Tonnage on inland waterways increased 50 percent between 1947 and 1957, and ton-mileage has risen more markedly than tonnage in the postwar period. Traffic moving on the inland waterways is concentrated in relatively few commodity groups, dominated by coal, petroleum products, and sand and gravel.

As to adequacy of waterways in event of mobilization, they have been improved since each of the last 2 years, and the Congress is providing further improvement and maintenance. Channels, turning basins, and harbors have been deepened, widened, and extended; new locks have been provided at critical places. Local enterprise has cooperated, not only by providing rights-of-way, but especially in the development of terminal facilities. Wharfage has been expanded and cargo handling and storage capabilities greatly increased. The result of the combined efforts of Federal, State, and local governments and of private enterprise is evident in the great increase in cargo moved over the waterways during the past 10 years.

The current program of maintenance and operation of the Corps of Engineers includes a grand total of 240 locks and 190 navigation dams.

According to the corps, the number of these locks and dams will decrease as high-lift structures are provided, each of which will replace several of the structures being superseded because of advanced age or obsolescence. As an example, the 46 locks and dams now in existence on the Ohio River would, upon completion of the present project, be reduced to 37, through the construction of 3 new facilities to replace 12 preexisting facilities.

Can inland water capability be expanded significantly in the event of mobilization? That question is to a large degree answered by examining the acceleration occurring during each of the last two wars. From 1940 to 1942, traffic on inland waterways measured on a ton-mile basis increased 26 percent. From 1949 to 1951, traffic increased 31 percent. In the event of mobilization today, I believe that a more intensive use of active transportation plant, and the restoring to service of plant economically obsolete but operable, would result in a similar increase. The waterways themselves; that is, the improved channels, the locks, and the harbors, are generally capable of sustaining such an increase. I say generally capable because there are restrictive features or bottlenecks. However, the Corps of Engineers has plans for the relief of those restrictions and presents them annually to the Congress.

A unique contribution of inland waterways to defense transportation effort in World War II was the delivery of small vessels, built inland, to ocean ports. More than 4,000 vessels were manufactured in shipyards on the Great Lakes and the inland rivers and delivered via inland waterways to the high seas.

Inland water transportation during World War II also demonstrated its utility in the movement of petroleum products. The vast quantities of petroleum moved in tank barges—often as part of a coordinated movement with other forms of transportation—helped to make up for declines in petroleum shipments caused by sinking of coastwise tankers and the transfer of vessels to naval service.

The inland waterway industry appears to be able to expand to meet heavier traffic demand.

AIR TRANSPORT

Civil air transport: Federal airway mileage has increased from 32,100 miles in 1940 to 127,795 miles at present.

The air transportation industry is undergoing a transformation at the present time with the phasing out of many piston-type aircraft and the phasing in of turbojet aircraft. Regularly scheduled international service with jet aircraft was inaugurated by American and British operators in October 1958, and regular domestic jet service in the United States is an even more recent development.

Turbojet air transportation, signalized principally by sharp decreases in scheduled flight time and extremely large carrying capacity, is revolutionizing the airline industry through its effect on all phases of the industry—technical, economic, and financial.

Similarly, the introduction of the new aircraft has a highly significant bearing on the question of the adequacy of air transportation to support the national defense in event of emergency.

On the technical side, introduction of jet aircraft poses serious problems stemming from their ability to fly higher and faster than conventional aircraft, their greater size, and the need to fit them into

the existing traffic patterns. Technical solutions will be forthcoming but will tend to be retarded in some areas of the world served by U.S. carriers by the cost, for example, of building and operating new facilities, lengthening runways, improving communications and navigation aids, and establishing upper air observation stations.

Economic and financial implications of the introduction of jets include the high initial cost of the aircraft, the problem of disposing of surplus piston-engine types and the possible need for low fares to encourage the rapid development of the traffic and to maintain load factors at satisfactory levels.

With speeds of the order of 600 miles per hour and passenger-carrying capacities as high as 170, one of the largest of the jet aircraft is capable of generating as much passenger-mileage per year as a 40,000-ton ocean liner. This example shows clearly the marked changes occurring in airlift potential and in the relative position of different agencies of transportation in moving persons and property under either peacetime or wartime conditions.

Long before the introduction of either turboprop or turbojet aircraft the airline industry began its strong upward thrust in terms of added capacity and increased output. For example, in the first postwar year of 1946 our domestic trunk airlines, and our foreign and overseas air carriers handled scheduled revenue passenger-miles of 5.9 billion and 1.1 billion, respectively. By 1958, these totals had increased to 24.4 billion and 6.0 billion passenger miles.

Available seat-miles, a measure of capacity offered, increased, for the trunklines, from 7.5 billion in 1946 to 40.7 billion in 1958, and for foreign and oversea lines from 1.6 billion to 10.1 billion.

Between 1946 and 1957, the domestic airlines increased their participation in total intercity passenger-miles of commercial transportation agencies from 6 to 35 percent. Most of this gain was offset by a loss on the part of the railroads; passenger traffic on buses and inland water carriers did not, in the aggregate, change to a relatively large degree during this period.

Aircargo traffic has not increased as rapidly as air passenger traffic, although it has shown a sharp rise from the levels of the early postwar years. For example, domestic trunkline cargo ton-miles totaled 290 million in fiscal 1958 compared with only 89 million in fiscal 1948. The corresponding figures for international U.S. airlines were 141 million and 46 million in 1958 and 1948, respectively.

I understand that the Federal Aviation Agency is prepared to comment on the special characteristics of the aircargo problem.

Except for certain difficulties inherent in the introduction of turbojet aircraft into regular service, and problems connected with provision of adequate aircargo capacity, the civil airline industry appears capable of handling an expanded volume of traffic.

Airports and airways: Total U.S. civil airports numbered 6,412 in 1957, divided as follows: Public use, 3,195 and limited, 32,217. This compares with only 4,026 airports recorded with CAA in 1945. The public use category includes all airports serving scheduled and large irregular air carriers, intermediate landing fields, airports having a true-light certificate to indicate a lighted airport; and all other airports which are operationally active. The limited airports are those not qualifying as public-use airports; the figure given above for limited airports includes seaplane bases and heliports.

The national airport plan prepared annually specifies in terms of general location and type of development the projects considered to be necessary to provide a system of public airports adequate to anticipate and meet the needs of civil aviation. The plan for 1959 includes a grand total of 3,324 airports, of which 95 would be turbojet airports. Air commerce airports aggregated 1,045 and general aviation airports 2,279. The air commerce airports are divided as follows: Local, 176; trunk, 561 (8 turbojet); continental, 44 (38 turbojet); intercontinental, 50 (49 turbojet); heliports, 136; and seaplane facilities, 78.

Prospects for rapid development of airports are relatively favorable. The national airport plan, of course, does not obligate communities to build the airports approved in the plan nor does it necessarily indicate that Federal funds will be pledged; nonetheless, the current plan lays the basis for (*a*) a system of improvements or additions which will assure that the Nation's aviation growth will not be retarded by airport inadequacies; (*b*) recognition of the need for various ground facilities, such as runways, fuel storage, taxiways, and loading aprons to meet not only present but future needs; and (*c*) provision for the special requirements of turbojet aircraft.

The numerical preponderance of general aviation airports in the current airport plan reflects the magnitude of this phase of aviation, which embraces civil flying activities outside the sphere of air carrier service. The great importance of this phase of aviation is indicated by the fact that in 1957 about 66,000 general aviation aircraft flew 10.9 million hours. In the same year, with their 1,500 planes, the U.S. scheduled airlines flew only 3.7 million revenue hours.

The adequacy of capacity of some of the airports is open to question. There are, of course, many airports which are not used to capacity; expansion of air activity at some of these airports will assist materially in handling the greatly increased load that would be placed on the air transportation system. On the other hand, airport capacity cannot be repositioned to meet the specific needs of specific areas.

Based on last year's traffic statistics, less than one-half of the large industrial hubs in the United States could accommodate a one-third increase in air movements at their airports. A number of particular airports, notably Washington's National and Chicago's Midway, are already being used at their practical capacity.

Fortunately, in the two examples, the programs for O'Hare International Airport at Chicago and Chantilly Airport at Washington will correct deficiencies for these two cities. However, we shall be continually plagued with airport limitations at major hubs, which will require continued progress in airport improvement and expansion.

Ground handling equipment is generally adequate, largely because airlines usually maintain their own ground handling equipment—a practice which through duplication provides some reserve capability. Fuel supplies vary at the different airports but generally will not exceed the stocks required for 2 or 3 days' operation at accelerated levels. Some type of accelerated fuel resupply at civil airports will be required for maximum performance of the air transportation system. Under austere standards, passenger terminal facilities are probably not a limiting factor. Terminal facilities for air freight are very inadequate, and unlike passenger terminal inadequacies, the deficiencies in freight terminals would have a serious detrimental effect upon the capacity of the air transportation system.

To an even greater extent than is true throughout the air transportation system, additional selectively qualified manpower must be available for any significant expansion in aircraft maintenance capability. Large-scale stocking of spare parts is impeded by their high cost and rapid obsolescence, with the result that production of parts usually is closely metered to match current evident demands. Adequate maintenance of aircraft under significantly increased loads will require an increased flow of spare parts on a priority basis.

The airways of the United States and those used by U.S. airlines overseas may be broadly said to encompass all of the air navigation, traffic control, communications, meteorological, and related facilities needed by our carriers to navigate safely and efficiently between, and into and out of, the airports they serve.

The Civil Aeronautics Administration reported in 1958 that increased efficiency contributed to safe and fast handling of the ever-increasing volume of air traffic during fiscal year 1958, and that the airways modernization and flight safety programs meanwhile were continuing at an accelerated pace as CAA's personnel increased by 4,295 to reach the total of 25,805.

EXPANSION OF TRANSPORT PLANT

It has been noted that the increase in gross national product over the past two decades closely parallels the increase in the transportation industry. This is only significant in that the increase in gross national product must be followed by normal accretion in transport capacity; otherwise, the gross national product would reach a certain point and from there maintain a plateau, or, even worse, decline for lack of transport capacity to perform the freight and passenger transportation incident to an expanding economy.

Despite some rather apparent inequities in the opportunities of the various modes of transport to compete for business, the transportation plant is now producing at the annual ratio of 1.4 trillion intercity ton-miles and 0.7 trillion passenger-miles. Intercity ton mileage is 24 percent higher than in 1944, and, passenger mileage is 135 percent higher than in 1945—the peak war years in each case.

The Nation's resources are directed primarily toward providing the needs, comforts, and conveniences of living, but when war comes, all this is changed. All these resources must be translated into sinews of war. Consequently, with the gradual reduction in nonessential transportation of property and passengers, we will be able to substitute the transportation of essential goods and persons. Stated differently, the ton-miles and passenger-miles that are performed today would be devoted to the transportation of essential goods and passengers rather than providing for the peacetime needs, comforts, and conveniences of living.

Further expansion in essential transportation can be accomplished by the establishment in an emergency of controls over the transport operation which will increase the volume of essential traffic needed in an emergency, such as increasing the loading of all transport equipment and reducing the time of delivery of goods and transit time of passengers.

EQUAL OPPORTUNITY UNDER GOVERNMENT TRANSPORT POLICY

It will be noted from the above that, despite the ability of the transportation plant to accommodate additional traffic, there are inequities in the ability of the various forms of transportation to compete for traffic due to local, State, and Federal Government policies. This Department has recognized that situation for some years and has made efforts at resolving many of these difficulties.

The Secretary of Commerce on December 1, 1949, made a report to the President on the "Issues Involved in a Unified and Coordinated Federal Program for Transportation."

Again in 1955 the Presidential Advisory Committee on Transport Policy and Organization undertook at the request of the President a reappraisal of transport policy. A significant portion of that report, it seems to me, states the case very succinctly.

> In many respects, Government policy at present prevents, or severely limits, the realization of the most economical use of our transport plant * * *. We believe that such a system, in the face of rapidly developing technology and a high rate of innovation, is to be achieved only by the exercise of greater freedom for competitive experimentation which enables the purchaser of transport to adapt both services and cost opportunities to his own requirements.

The Transportation Act of 1958 made various modernizing amendments to surface carrier transport regulation. Since 1954, when the Presidential Advisory Committee on Transport Policy and Organization was writing its comprehensive recommendations, we have seen a steady flow of amendments to our regulatory statutes. These include a revised rule of ratemaking, revision of motor contract carrier provisions, progress in solving the railroads' passenger deficit problem, and progress in putting Government purchasing of common carrier services through application of section 22 quotations under better management standards. Without the early decision of the Advisory Committee to go ahead with a program of regulatory revision, the majority of these provisions would not have come about so soon.

Again this year the President in his budget message called upon the Secretary of Commerce to undertake a comprehensive study of national transportation to identify emerging problems, redefine the appropriate Federal role, and recommend any legislation or administrative actions needed to assure the balanced development of our transportation system.

It should be said that both the Senate and House Committees on Interstate and Foreign Commerce are looking into various matters of Government policy affecting transportation.

The basic problem areas appear to stem from—

(1) Differences in concepts with respect to regulatory needs.

(2) Direct subsidies, and differentials in the cost of performing service as between carriers who provide their own facilities and carriers who have facilities provided by the Government.

(3) Government as a buyer and operator of transportation services.

(4) Different programs of employees' benefits applying in different transport areas.

(5) Taxation at various levels of Government.

Time does not permit any detailed discussion of these matters. Suffice it to say here that they will be given careful research, analysis,

and review by persons knowledgeable in both educational and practical fields.

The Transportation Council for the Department has already been drawn into the study and their advice and counsel will continue to be sought on many individual issues and the overall study. The regular transportation staff of the Department is also going to be utilized in connection with the study.

When the study is completed in the various areas and they have been reviewed and drawn together and the conclusion reached which indicates the promulgation of initial actions it will be the task from that time on to get the various actions executed, either legislatively or administratively.

The transportation situation from then on will be under continuous review by the permanent staff of the Department, and information, I am sure, will be promulgated by the Department periodically so that the people who work in the transportation economy will be kept advised as to the overall condition of our transportation situation, nationally and on a regional basis, and to the extent that it is feasible to do so.

What will ultimately be our conclusions in this vast and complicated area of transportation, I cannot say. It would be premature at this time to voice an opinion. I can only say with respect to this study that we will try to make recommendations from the facts adduced to create an environment under our free enterprise system in which each mode of transportation in the industry may develop transportation capacity it can most economically produce to meet the needs of the using public.

CONCLUSION

We have no way of knowing, and I might add in this connection that any figures would be sheer speculation, the number of ton-miles and passenger-miles that our transportation plant would be required to produce in an emergency, and the period of time for which it would be necessary to produce this carrier capacity.

It seems apparent from what I have said that the transportation plant will be able to supply essential transportation to support the national defense effort. There may be shortages, as there were in World War II, but by and large it is believed that the transportation industry would meet these shortages.

I would be remiss, however, if I did not inform this subcommittee that there are trouble spots in our transportation industry. One of these trouble spots, as you gentlemen well know, is the railroad industry. Another is the aircargo problem. A third is the failure to rehabilitate the merchant marine industry and particularly the coastwise and intercoastal industry. There are several others which do not need to be discussed at length here. These trouble areas are, of course, being watched by this Department which will, upon completion of its transportation study now in progress, undoubtedly, make certain recommendations regarding the industry.

To maintain the transportation industry in a financially healthy and modern state is certainly the desire of all. The Government, therefore, must assist in creating an atmosphere in which all modes of transport can thrive and coexist. Forthright Government regulation,

and reasoned promotional, procurement, and taxing policies can be a mighty force in creating an invigorating transportation climate.

Mr. KILDAY. Thank you, Mr. Secretary.

As I indicated in my opening statement, this is designed to be a study by the subcommittee. That presupposes that we need information.

You have been very helpful to us and we appreciate it. We appreciate the document you have brought.

Are there questions?

Mr. SANDWEG. I was wondering, Mr. Allen, about this business of the 100 percent load factor when you talk about piggyback plans 3 and 4. I noticed recently that there was reprinted in the Congressional Record, at the request of Mr. McCormack, a statement by the president of the U.S. Freight Forwarders Division, Mr. Forgash, that piggyback plans 3 and 4 are having some problems concerning rates and the like.

Are those insurmountable problems that you know of? Do you think that the railroads and the truck industry are going to be able to get together on this piggyback problem to the benefit of both?

Mr. ALLEN. My personal opinion: First, I would say on the rate problem, the Interstate Commerce Commission witnesses when they appear would probably have a better idea of just what is going on.

My personal opinion, from having observed the piggyback operations in several places, has been that for some lengths of carriage and for some types of movement, the efficiency with which the freight is transported from door to door makes it almost certain that where piggyback operation is useful, it will be developed and arrangements will be made to carry it on.

Mr. SANDWEG. I was quite surprised at some of the things that you said about piggyback plans 1 and 2. They seemed to start and stop and never really got going.

Will that be a part of Dr. Williams' study, do you think?

Mr. ALLEN. I think it will be a phase of it. To be very candid, the time in which we are going to operate is going to limit the study.

We hope in this study to produce a program by October—possibly late October—that can be reduced to recommendations for congressional and executive action.

So there will be a limitation coming from time alone. But I think that whatever we do in the study will develop the areas that need further consideration, and it is equally a part of our objective to create within the Department of Commerce a transportation group, I should say, a staff of transportation experts whose function will be to look at the overall picture, rather than the segmentized problems of transportation.

So that whatever we would miss in this study would find an agency that would continue to go into the other fields.

Mr. SANDWEG. Thank you.

That is all I have.

Mr. VAN ZANDT. Mr. Secretary, first I wanted to commend you for this very comprehensive statement. It certainly presents a very encouraging picture of our transportation facilities.

Let me ask you a question—Why do you use 1957 for most of your figures?

Mr. ALLEN. I think the figures were available is the real reason. I can check on that. The 1958 figures are not complete yet.

Mr. VAN ZANDT. It is proper to assume that the 1958 figures will show a decided improvement in many ways in some of the transportation fields; is that correct?

Mr. ALLEN. I think the trend is good.

Mr. VAN ZANDT. In some areas it will show a decline, will it not?

Mr. ALLEN. I don't know the areas to which you refer.

Mr. VAN ZANDT. I am thinking of the railroad picture.

Mr. ALLEN. I think that varies by areas and by railroads.

Mr. VAN ZANDT. I was thinking of the number of railroad cars, passenger cars, and employees. I think that the figures for 1958 and even 1959 will show a decline over 1957.

Mr. ALLEN. I would look, without knowing all the figures, to see a decline in employment coming out of the fact that railroad trains are now longer because diesel engines will pull more freight cars.

I would look to see a decrease in the number of cars for the same tonnage to be hauled, because rails are now heavier and cars are built for much heavier loads.

In addition, the modernization of terminals will put freight trains through yards and classify new trains that don't have to stop between cities, hurrying up the transportation so much that the same car will carry more ton-miles because it is rolling a greater percentage of the time.

I think you have to have someone analyze the figures as part of a complete study, rather than to take individual figures and try to draw conclusions from them.

Mr. VAN ZANDT. I imagine the witnesses who will follow you as they cover their specific area of transportation will bring us closer to the present-day period than 1957 through their testimony.

Mr. ALLEN. I think they will have the most up-to-date figures.

Mr. COHELAN. May I take this opportunity to compliment you on an excellent statement.

I was wondering about the problem of the adequacy of the fuel supply in relation to the facilities that you have described both in peacetime circumstances and in the event of possible wartime situation.

Does your study expect to deal with this question—the study that you have in progress?

Mr. ALLEN. That is a problem I hadn't given any thought to, so this is offhand.

I would say our field is transportation, and the supply of what is to be transported is a little outside the study—that is, the adequacy of supply of fuel for a variety of purposes.

I think that in large part and between most points we would be able to transport fuels. I think there would be adequate fuel under controls for whatever transportation would be essential.

The experience of World War II is an indication that in wartime some services, such as private automobile operation, give way to other services which are deemed more essential.

I would think that probably in the civil defense mobilization presentation you would get a good answer to that question

Mr. COHELAN. This is precisely what I had in mind. We have to allocate our resources in times of crisis and, certainly, fuel is one of the sensitive areas.

It seems to me as we contemplate nuclear or thermonuclear warfare that this is a very serious problem in relation to conventional facilities, and it is something that it seems to me might be borne in mind in connection with the study, to do some speculation in this field.

Mr. ALLEN. I think it undoubtedly will be borne in mind. In the first place, the most obvious place that has come under our consideration is with regard to what would happen to the port facilities, the ships of the merchant marine, in the case of a nuclear attack. You don't know where it is going to hit, of course.

The fact that ports are pretty widely dispersed and many ships are at sea are factors that favor a continuation of service even after the attack comes

But just what damage would be done by a nuclear attack on fixed facilities is a very difficult thing to appraise

Mr. COHELAN. Thank you, very much.

Mr. BECKER. Pursuing this, I would like to follow up on Mr. Cohelan about the study, Mr. Secretary.

It would seem to me that a transportation system or a transportation study without being adjusted to the fuel problem, or the supply of fuel, wouldn't seem to avail very much, because we could have all the rail, all the ships, planes, cargo trucks that could possibly be needed for any emergency, but if we didn't have a coordinated study as to the supply of fuel together with that, it would seem to me to be rather hopeless.

Wouldn't you think in a study of that nature that the two would have to be somewhat combined and reported, jelling the two together?

Mr. ALLEN. I think there has to be some coordination.

As a general proposition, I think our problem is to determine where the fuel is likely to be and where it is likely to go and determine whether there is a facility that can move it between those points.

At that time, someone in control of a defense, under an emergency condition, someone in control of civil defense or in the Department of Defense would establish the policy as to how fuels should be used.

If it was to be taken from one State and moved to another, we could move it. But someone would have to determine how it was to be moved.

Mr. BECKER. I think the point is that whether or not the Defense Department or somebody allocate fuel, the question is whether fuel and transportation of fuel could be handled so to coordinate with the necessary modes of transportation.

Mr. ALLEN. I think we can do that.

Mr. BECKER. That is the point I am getting at. We have had some discussion before that that is one of the most important aspects.

Mr. ALLEN. I think if the statement is reviewed that in each instance where the carrier of fuel is mentioned, there is a fairly good appraisal of the ability to substitute the peacetime carriage for wartime carriage and the ability to expand the carriage.

Mr. VAN ZANDT. Mr. Secretary, you say in your statement on page 2 that the Department has the responsibility of developing a reasonable transport policy to insure that our expanding Nation, population, and economy will have, at all times, adequate transportation facilities to produce the necessary passenger-miles and freight ton-miles to meet national and regional needs of our commerce, postal service, and the national defense.

In carrying out this responsibility, am I to assume that the Secretary of Commerce assembles from time to time representatives of the agencies of Government, including Defense, for the purpose of determining whether or not our transportation needs are adequate, not alone at that time but to meet the needs of the country in the event of an emergency?

Mr. ALLEN. That is a question that is rather difficult for me to answer in view of my rather recent advent to the Department of Commerce.

I think several years ago the effort to study transportation was on a Cabinet level. The Secretary of Commerce was the chairman of the committee and the report is usually referred to as the "Weeks Report." It came out of that.

There are a variety of coordinating efforts made. I doubt that there has ever been a sustained effort to have a staff that looks toward the overall transportation policies. That is indicated by the fact that in the budget message the President included the paragraph which I quoted, that there should be a study of the emerging problems and a reevaluation of the Federal role, and recommendations for executive and congressional action.

All of those things are looking toward the attainment of the objectives that I think you would have in mind for such a coordinated effort within the Department or within the Government someplace.

That is the objective of our study in a sense, to bring together all the needs of the Government and all the policies of the Government and try to get a single overriding policy that defines the Federal role with respect to transportation.

Mr. VAN ZANDT. Frankly, I am disturbed by the fact that you have to depend on 1957 figures in trying to establish and maintain a transportation system for today and tomorrow in the event of an emergency.

In the conclusion on page 34, you point out here:

> It seems apparent from what I have said that the transportation plant would be able to supply essential transportation to support the national defense effort.

Mr. Secretary, if you are back to the 1957 concept of war, it is quite different from the 1959 concept of war and what it will be in 1961 and 1962.

I am disturbed by the fact that we have to do our planning on figures as far back as 1957.

Mr. ALLEN. I think the figures, the statistics that are complete are limited to those obviously which have been completed. The trends I think are more apparent and may be projected.

While we have adequate figures and accurate figures that go back 2 years, the trends which they seem to establish would be projectable to this time. And I think any variation from the trend would be pretty easily noted.

I would think with the 1957 figures, plus figures before that, would give a pretty good idea of the actual trend as of now.

Mr. KILDAY. Thank you, Mr. Secretary. We appreciate your coming.

Who is the next witness?

Mr. SANDWEG. Mr. Chairman, since we have a prepared statement from Colonel Siegle, the Chief of Defense Plans and Operations of the Bureau of Public Roads, and since Mr. Allen has pretty well covered

the area of the road system, I wonder if we could submit that for the record?

Mr. KILDAY. Yes.

STATEMENT BY COL. ARTHUR G. SIEGLE, CHIEF OF DEFENSE PLANS AND OPERATIONS OF THE BUREAU OF PUBLIC ROADS

Mr. Chairman and members of the committee, I appreciate this opportunity to appear before your committee and comment upon the highway needs of the national defense.

For four decades the Bureau of Public Roads has concerned itself with defense implications pertinent to the growth and development of our highway systems.

We have sought and enjoyed the advice of defense officials down through the years. We have had splendid cooperation from the State highway departments in determining and meeting highway needs of the national defense.

The advice given by the Emergency Planning Committee of the American Association of State Highway Officials and the assistance of the State highway departments in our joint civil defense and mobilization readiness activities have been most helpful in developing throughout the State highway departments and our own organization a better understanding of the problems with which we would be confronted in an all-out war involving massive nuclear attack.

We have been requested by the Under Secretary for Transportation to furnish your committee our views on the state of highway transportation to meet an allout war in which nuclear weapons, if employed at all, would be confined to tactical uses.

We understand that the interest of this committee is addressed to what should be done to improve the Nation's state of readiness. The most important thing to be done in the highway field is to insure that the program for development of the National System of Interstate and Defense Highways is carried forward.

Before discussing the defense significance of the National System of Interstate and Defense Highways I would like to review what happened to highway transportation during World War II, and to identify factors which would or should have some different effect if we were to face a similar war situation now.

HIGHWAY TRANSPORTATION IN WORLD WAR II AND NOW

During World War II, civilian motor vehicle registrations dropped 12 percent while overall traffic declined 42 percent on rural roads and 33 percent on city streets.

On the other hand, intercity bus travel more than doubled during that period, and city bus and streetcar use increased 60 percent.

Truck combinations which move the bulk of the intercity highway freight declined only 7 percent below the prewar peak year of 1941.

Since 1941 our population has increased 30 percent; our total highway traffic has doubled, and intercity highway freight ton-mileage has tripled.

Of considerable significance is the fact that freight ton-mileage by highway in 1941 was only 16 percent of that moved by railroad, whereas in 1958 it was 47 percent.

The Nation now depends more upon trucks for shipment of farm products than it did in 1941. In 1941 trucks hauled 59 percent of livestock to stockyards. Now most of the major markets receive 90 percent or more by truck. In 1941 about half of the eggs and poultry reached our major cities by truck. Now practically all of it is received by truck. It is safe to say that larger proportions of all farm products are being shipped by truck than ever before.

Since World War II our cities have grown outward and many street railway systems have been abandoned. We have many more people; they travel farther to work; they report to more scattered points for work, and all but a few rely entirely on automobile or bus transportation.

Dispersal of industry to the suburbs and to rural areas has created entirely new commuting patterns. More people, all traveling farther to work, with fewer share-the-ride opportunities—all these factors add up to more vehicle miles of essential travel.

Under conditions of general war not involving widespread massive use of nuclear weapons, we are one step closer to all-out nuclear war. We would undoubtedly work desperately to develop the strongest offensive capability for employment of modern weapons and the best defensive facilities for protection of our people.

Our efforts would involve construction of huge new research and production plants and construction of new military installations for launching of modern weapons.

Transportation of workers to these new sites would often involve long distances and would logically require provision of new defense access roads on a larger scale than in World War II.

It is between major wars that we must accomplish the expansion and development of our highway transportation networks.

Although we have accomplished considerable highway construction since World War II, we have not kept pace with the phenomenal rate of growth of highway traffic which has doubled since 1941.

On a national basis for all highway systems in the United States some 39 percent of the cost of meeting our needs if for reconstruction and resurfacing. This includes some upgrading for modernization and expanding traffic needs. Some 25 percent of current construction is needed simply to hold our investment at a fixed level.

In terms of 1956 price levels the value of our investment in highways in 1941 was $45 billion, or 14.3 cents per vehicle-mile of 1941 traffic. The value of our investment in highways in 1959 is $81 billion, or 11.5 cents per vehicle-mile of 1959 traffic.

In view of our ever-increasing traffic congestion and the declining value of highway system per vehicle-mile of travel, it is important that highway programs at all levels of government proceed at rates in balance with the needs of our expanding economy.

In authorizing expanded programs for our Federal-aid primary and secondary systems, in addition to authorizing development of the National System of Interstate and Defense Highways, the Congress has pointed the way for State and local governments.

In World War II highway departments lost one-third of their maintenance employees to the Armed Forces and war industries, and there were inadequate safeguards to enable them to continue essential services. In the event of a similar future war this situation should not be allowed to recur.

In comparing highway transportation now with highway transportation in World War II the following conclusions are obvious:

Highway transportation would play a relatively larger role in a future general war than it did in World War II.

Certainly civilian vehicle production would have to be curtialed drastically again to enable the automotive industry to produce military vehicles and arms. But production of spare parts to keep civilian vehicles and highway maintenance equipment rolling would become more important.

Workers in all industries would need more motor fuel and tires per capita. Both intercity and local bus travel would increase well above levels existing at the beginning of a future war. Hauling by truck combinations should be sustained at the highest possible level.

Highway construction would be curtailed, but adequate provision should be made to replace sections of highways that become unserviceable through obsolescence, natural disaster, or sabotage. Also needed would be construction of necessary roads to serve new and expanding wartime industries, installations, and standby alternate port facilities.

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS

Of the 3.4 million miles of highways and streets in the United States, the most important from a defense standpoint are those included in the 41,000 mile National System of Interstate and Defense Highways. This system directly connects all of our principal metropolitan areas, cities, and industrial centers.

Comprising only slightly more than 1 percent of the total highway mileage, this system when completed, will accommodate no less than 20 percent of the Nation's highway traffic. It is being built to high standards with access controlled to assure uninterrupted flow of traffic. It will provide direct service into our major cities, and will also include belt routes around all cities of more than 200,000 population, as well as around many of our smaller urban places.

Even in a general war where nuclear weapons, if used, would be confined to tactical uses, dispersal and mobility will be important to our national defense. Devastating attacks were made on military installations, cities, ports, and industrial targets in Europe in World War II before the advent of nuclear weapons.

The National System of Interstate and Defense Highways is contributing in an important way to the Nation's chance for survival by inducing dispersal of industry and population. It includes the nucleus of urban expressway systems

which induce people to move into the suburbs. As expressways are developed, not only people but industries, stores, and warehouses find the suburbs more attractive. The overall effect is to scatter our urban population in a pattern which offers less remunerative targets to an enemy.

Not only does the National System of Interstate and Defense Highways induce spreading of our urban areas, but it also attracts industry to new land stretched out in ribbons across our country. As more and more industries locate along this system, they conform to a geometric pattern that creates the most difficult kind of a target for attacks from the air.

Nor is it necessary that assembly plants and plants of subcontractors be located in close proximity. During World War II, the motortruck became recognized a part of the Nation's wartime assembly line.

Manufacturers learned of advantages of operating long-distance highway production lines which traversed entire States or a number of States before the final point of assembly was reached. This practice conserved transportation because partially manufactured articles are generally lighter and smaller to transport than raw materials.

As project after project is being completed on the National System of Interstate and Defense Highways travel times are being reduced. When the Baltimore tunnel was opened intercity bus schedules between Washington and New York were cut from 5½ hours to 4½ hours—a saving of 1 hour. Reduction of travel time means that with the same manpower and equipment more hauling can be accomplished. The size of truck and bus fleets are directly proportional to vehicle turn-around time.

Where construction of urban expressways cut commuting time in half, the same bus can make two round trips in the time previously required for one. Implications for savings in skilled manpower in wartime are obvious.

Savings in fuel, brakes, tires, and wear and tear on mechanical parts through avoidance of changing speed, stopping and starting are important in peacetime as operating economies.

Availa' ility of expressways for both urban and intercity traffic in wartime will conserve these critically needed items.

For these reasons the construction of the National System of Interstate and Defense Highways becomes most important in a war of the type which we have been asked to discuss.

So far, progress on construction has been right on schedule. If war must come, it is our hope that the system as now authorized will have been substantially completed prior to outbreak of hostilities.

TESTIMONY OF THEODORE HARDEEN, JR., ADMINISTRATOR, DEFENSE AIR TRANSPORTATION ADMINISTRATION

Mr. SANDWEG. We have Theodore Hardeen.

You do not have a prepared statement?

Mr. HARDEEN. No.

It seems to me that you will want me to supplement the remarks made by Secretary Allen with reference to mobilization capability in the field of air transportation. And in this regard I believe you would want to know what the present air carrier inventory may be, and you will also be interested in knowing what the projected air carrier inventory may be for 1960 and 1961.

Our present air carrier fleet consists of 2,100 aircraft which are made up of 1,150 4-engine airplanes and 950 twin-engine airplanes.

Through calendar year 1961, it is anticipated that the air carriers will dispose of piston aircraft numbering 843. Of these aircraft, 4-engine will be 556 and twin-engine 287.

As to the procurement of new aircraft by the carriers through 1961, the carriers will acquire a total of 355 aircraft, all of which will be turboprop or turbojet aircraft. These will be, for your information, 90 Douglas DC–8's, 97 Lockheed 188's, and 112 Boeing 707's, 47 Convair 880's, and 9 Fairchild F–27's.

Totaling this at the end of calendar year 1961, the air carrier fleet will consist of 1,612 aircraft, of which 594 will still be 4-engine piston aircraft. The balance will be turboprop or turbojet aircraft.

In addition to these figures, and this is interesting since it relates to cargo capability, on presently ordered airplanes there will be 10 of Canadair LC–44, which is a true cargo aircraft developed and being manufactured by Canadair, wholly owned by General Dynamics.

What are we doing in connection with planning for the utilization of our civil air capability in the event of mobilization or national defense?

The Secretary of Commerce is charged with the responsibility of allocating aircraft to meet military requirements in the event of war.

This program has been called the civil reserve air fleet program, or the CRAF program?

Mr. VAN ZANDT. What program?

Mr. HARDEEN. CRAF.

In connection with the Air Force and the Department of Defense we have allocated and physically modified sufficient aircraft to meet the requirements laid down by the Department of Defense by the Joint Chiefs of Staff.

I may tell you that this allocation amounts to roughly 25 percent of the Nation's total air carrier capability, and in terms of number for fiscal year 1960 this is 244 of the long-range 4-engine aircraft.

I think it is significant to call your attention to the fact that for 1961, we meet the military requirements, again as laid down by the Joint Chiefs of Staff and transmitted to us, by allocating only 173 units.

This is possible because of the advent of jets and delivery of jets to the air carriers, and does not indicate a reduction in capability but on the contrary an increase in capability.

This is not merely a paper allocation. These airplanes are specifically designated by their tail numbers and physical modifications which have been laid down by the military and have been made in the case of 85 percent of these airplanes.

In addition to the allocation and modification of the aircraft we have planned with the airline industry, and I should say here that we have had the most tremendous cooperation from the industry in supplying technical advisers to us, as well as top executives, and have stockpiled parts for these airplanes in strategically located places around the world, designated by the Air Force over the routes which these airplanes will operate.

There, too, the routes have likewise been designated by the Department of Defense and the stations have been designated, and while these change as the military plans change, they have been substantially static for the past 2 or 3 years.

As Mr. Allen has indicated, there is in the U.S. carrier fleet a deficit in cargo capability. In meeting the military requirements we have allocated all of the long-range cargo aircraft to the military support.

There still remains a deficit, however. These figures are classified, and I will be very glad—as to what this deficit is—and I will be very happy to supply them to the committee later on, if you so desire.

In addition to the direct military support operation, the Secretary of Commerce is charged with the responsibility of assuring the continued commercial operation for the war supporting economy. This is characterized as the war air service program.

The Secretary has designated this responsibility to the Chairman of the Civil Aeronautics Board, who jointly with the Administrator of Defense Air Transportation is developing this war air service program.

The Chairman of the Board has set up a committee made up of industry and Government people who are now, and for some time past been, developing principles under which the war air service program will operate.

It was determined that it would be inadvisable to attempt to lay out an actual route pattern in advance, because of the uncertainty to what airports might be available or where the essential civil traffic would be required. However, as I have said before, principles have been established for the operation of the war air service pattern if needed.

I think one illustration will interest you as to how the nonessential points can be eliminated.

There are roughly 525 stations in the United States which are served by our air carriers. By eliminating those stations which do not enplane or deplane more than 10 passengers per day we can eliminate immediately about 225 stations.

This has been accepted as one basis for determining whether a point will or will not be served. Needless to say, vacation spots and resort travel will be eliminated.

In addition to the air carrier capability in this country, we have a transport fleet owned in large part by corporations of airplanes weighing over 12,500 pounds. These are airplanes of the Lockheed, Lode Star, and DC types and above. There are 800 or more of these airplanes. This will provide a very substantial amount of airlift.

We have determined together with OCDM that the most efficient use for this lift capability in the initial stages of a war would be for civil defense purposes; that is, for transporting blood plasma, doctors, nurses from one area of the country to another where they may be urgently needed. And, in addition to that, for transporting the stockpile of material that OCDM has placed in some 42 locations in the country.

In connection with the war air service pattern, we have developed jointly with the Department of Defense under an agreement between the Secretary of Defense and the Secretary of Commerce an air priorities system.

We have designated at 24 locations within the United States—and we consider these to be the key airline points—individuals now employed by the airlines who will be available in the event of an emergency to act as regional air priority control officers.

And the air priority principles and requirements have been laid down and written up in an air priorities manual which is now in the process of being printed for circulation to the industry and other interested agencies, both in and out of the Government, in the very near future.

Title XIII of the Federal Aviation Act requires that the Secretary of Commerce provide aviation war risk insurance to our international carriers when and if this coverage cannot be obtained in the commercial market.

We have already been informed by the U.S. Commercial Underwriters that they will not provide aviation war risk insurance on any terms or conditions. The uncertainties of the loss and risk are so

great that they have determined this is something they cannot undertake because of the lack of experience in this type of risk.

We have therefore arranged to cover our international carriers for aviation war risk insurance, and this coverage will be available to them within 24 hours after the outbreak of war, or upon the cancellation of their existing commercial coverage, whichever may come first.

In this connection, you may be interested in knowing that as recently as last week the State Department has asked the Secretary of Commerce to provide that this aviation war risk insurance be made available for our American air carriers in certain trouble spots of the world, particularly Berlin.

You will be interested in knowing that planning in the international field is underway within NATO. A relatively new committee in NATO has been established, and that is called the Civil Aviation Planning Committee.

This Committee is now about 2½ years old and is doing the planning within NATO to guarantee the orderly evacuation of our own aircraft from Europe as well as our NATO allies, and also for the management operationally as required for our own aircraft and for, again, our NATO allies in the event of war.

I think I have covered briefly the mobilization planning which we are conducting in the Defense Air Transportation Administration, and I will be very happy to answer any questions which you may have.

Mr. VAN ZANDT. Mr. Hardeen, this CRAF organization that you speak of, as I understand it, in the event of an emergency 25 percent of existing commercial aircraft would be made available to the Government?

Mr. HARDEEN. Roughly 25 percent of the existing capability, Mr. Van Zandt. Numerically, it doesn't work out.

Mr. VAN ZANDT. Does it mean that the Government will buy these aircraft, lock, stock, and barrel, or will they rent them?

Mr. HARDEEN. No. It could be more properly called a rental arrangement because it will be a contract undertaking.

Mr. VAN ZANDT. What about the personnel? Do they continue in a civilian capacity or are they absorbed by the military?

Mr. HARDEEN. They continue in a civilian capacity. This is the feeling of the Department of Defense, as well as the carriers, that a better job can be done by our air carriers if civilian know-how is transmitted with the——

Mr. VAN ZANDT. Does the civilian personnel take orders from the military?

Mr. HARDEEN. No, sir; he does not. He takes orders still from his own carrier, but his carrier takes operational orders from the military.

Mr. VAN ZANDT. In other words, then, if he works for the United Air Lines and United Air Lines equipment is taken over by the Government, the Government gives him orders through the United Air Lines?

Mr. HARDEEN. I don't think this should be stated quite that way, Mr. Van Zandt. The Government will give operational orders to United and United will direct its personnel to carry out this requirement.

Mr. VAN ZANDT. What about your Reserve officers who are pilots and copilots of the existing airlines?

Mr. HARDEEN. We have made a study of that with our air carriers, and they have canvassed their employees to determine what their Reserve status may be. The latest examination of this was in October of last year and discloses that it will not be a serious problem with them, that less than 5 percent of their employees would be subject to recall. Five percent was the highest; in many cases it was 2 and 3 percent.

Mr. VAN ZANDT. In other words, the 5 percent of Reserve officers would be expected to report to their respective military organizations?

Mr. HARDEEN. Yes, sir; that is correct.

Mr. VAN ZANDT. In connection with the utilization of foreign aircraft, do you have any plans at the present time to make it available to meet our needs?

Mr. HARDEEN. We have no specific plans for that, except through NATO.

Mr. VAN ZANDT. That is what I had in mind.

Mr. HARDEEN. It could be done through NATO. That planning, as you perhaps know, NATO is very sensitive about it, securitywise, but I will tell you that there is planning to use our NATO allies' capability, as you have suggested.

Mr. VAN ZANDT. At no place in your planning at the present time will any aircraft be taken from commercial operators and turned over and operated by the military with military personnel?

Mr. HARDEEN. I know of no such planning at this time, Mr. Van Zandt.

Mr. BECKER. For 2 years we studied the CRAF program with the help of MATS. You are aware of that I know. One great problem in the CRAF problem comes in line with Mr. Van Zandt's questioning and that is: What happens, or will we have to have legislation insofar as the utilization of civilian manpower is concerned in the operation of the CRAF program, because it is apparent that we would not have sufficient military.

Now, I am talking particularly where this CRAF program would have to operate in a—not in a combat area, but to a combat area, whether any part of our country or abroad. Has any study been made as to what might be proposed in the event of mobilization of the necessary manpower to operate this CRAF program, because we could not, as you have admitted, give orders to civilian personnel. That is the nub of this whole CRAF program.

Mr. HARDEEN. This is a very serious matter. The carriers themselves have made studies within their organization, and their top management has assured us that they can perform and that they will perform. As you have pointed out, we have no authority, and I know of none in the Government, to allocate manpower, let us say, and if the carriers should fail in this regard, if their estimate is wrong, this would be a very serious matter.

Mr. BECKER. When did this estimate come about? Was it available a year ago? Was it within the past year?

Mr. HARDEEN. This subject has been discussed with the airlines, to my knowledge, for 4 years.

Mr. BECKER. It has been discussed, but this estimate that you have given, we didn't have it available to us a year ago. I am talking about the manpower now.

Mr. HARDEEN. In using the word "estimate" I did not mean that we have received from each carrier a statement of how many people in this category and that will go here or there. We have, however, in connection with the carriers, determined how many mechanics, how many traffic men, and how many of this category, skilled category and that, will be required for the operation, and as a matter of fact, to which particular point in the world they will be sent.

Mr. BECKER. You do agree that the nub of the situation of the use of some 25 percent of the total availability of the civilian aircraft on the CRAF program would depend upon the manpower situation?

Mr. HARDEEN. I could hardly disagree with that.

Mr. BECKER. And some investigation or further study or something has to come out of this where we will have manpower for the use of those planes?

Mr. HARDEEN. If there is any way of obtaining guarantees that certain individuals will go to certain places when they are told to go, that would be very useful and help in the planning.

Mr. KILDAY. Are there other questions?

Mr. BREWSTER. In the event of an all-out nuclear war attack, do you have plans for the 100 percent mobilization of our civilian aircraft?

You mentioned the figure 25 percent under your CRAF program.

Mr. HARDEEN. The figure of 25 percent coincides with the DOD requirement. If the DOD requirement were laid down at a higher figure, we could increase that. At the same time we must keep in mind, as I have stated earlier, the need for supporting a war economy. The figure could be increased. Utilization of the aircraft for the war air service pattern would be increased from an average of about 7½ hours a day to 10 hours a day, which is roughly a 33⅓ percent increase. And manpowerwise we plan to increase the workweek from 40 hours to 48 hours a week.

Mr. BREWSTER. Would there be any need for additional legislation to permit you to carry through this program?

Mr. HARDEEN. Not the program which I have just outlined, no, sir.

Mr. BREWSTER. On another subject—at the present time does the Federal Government give any direct subsidy to the airlines to provide in their new equipment certain essential different features, similar to the direct subsidy to the shipbuilders, say, in the case of the United States?

Mr. HARDEEN. The airplanes require, in order to fly over water and into military areas, certain physical modifications to permit them to carry electronic gear. The Government has paid for the installation of the specialized equipment.

Mr. BREWSTER. One last question. You said the airlines would dispose of approximately 800 piston-type planes in the next several years. By "disposition of" do you mean scrap, mothball, or sell overseas? And if the latter, do we have certain limitations so that those planes, if useful, could never be used against us?

Mr. HARDEEN. In order to sell an aircraft overseas, a support license is required of the State Department. I think that is the curb you have in mind.

Mr. BREWSTER. Of these 800, would the majority of them be sold for continued use or are they scrapped, or is there any program to mothball them and save them for future use by our Government?

Mr. HARDEEN. There is no program to mothball them. This has been suggested. But at present there is no such program. And as to where these aircraft are going to be sold or how they are going to be sold, I think the industry is very much concerned about that. I don't have the answer. Some of them will be absorbed, perhaps within this country, and some by our friendly foreign countries. This is a serious matter to the carriers as to how these will be disposed of.

Mr. COHELAN. Mr. Hardeen, on that point, it seems to me in relation to an earlier question that I asked the Secretary in respect to fuel requirements, it seems to me that the use of the piston engine aircraft would provide an economical use for air transport in the domestic side of the picture, at any rate, or at least this possibility should be explored, because in terms of the fuel requirement, as we get into jets, this is going to apparently expand your fuel requirements. So from the standpoint of efficient use and transport, getting it there, and all the evidence seems to indicate that in time of war, why, we get involved in maximum utilization of every available type of thing that we have, there would be a real use for this type of aircraft.

Mr. HARDEEN. The point you are making is perhaps that these surplus aircraft would be used to transport fuel from one point to another.

Mr. COHELAN. Not necessarily. The fuel use of piston aircraft is considerably less than jet aircraft, as I understand. It seems to me that because of that there would be many advantages in using the obsolete or phased-out aircraft, if it was available.

Mr. HARDEEN. I am not prepared to discuss the relative rate of flow of jet fuel and gasoline, but I think that there is probably a considerable difference. That is a technical question that I am not able to answer.

Mr. COHELAN. How about the aircraft; could we use it or not use it?

Mr. HARDEEN. There is no question about it. The aircraft could be used.

Mr. SANDWEG. There is one thing I would like to get in for the record, Mr. Chairman: Mr. Hardeen, are you familiar with the number of contracts that have been signed under the CRAF program?

Mr. HARDEEN. Yes, sir.

Mr. SANDWEG. Could you say for the record how many there are?

Mr. HARDEEN. The first contract and only contract has been signed by TWA. I have been informed by the Office of the Secretary of the Air Force that very shortly United Air Lines will sign, and that eight smaller carriers on the west coast are expected to sign also within the very near future.

Mr. SANDWEG. What is the total approximate number of contracts that they plan to have signed in this program?

Mr. HARDEEN. It will require 27 contracts.

Mr. SANDWEG. There has been one signed to date?

Mr. HARDEEN. Yes. The development of this contract has taken several years to get to a point where it is acceptable not only to the carriers, but to the Air Force as well. It is a very complicated and involved contract, as you can perhaps appreciate, when you understand we take about 25 percent of their total capability not only insofar as aircraft, but the personnel.

Mr. SANDWEG. The committee can appreciate that, I am sure. Yet the CRAF program is a strong arm of the DOD planning, and that

is the reason why we wanted to look into how close they are to having a capability that they desire. That is all.

Mr. BECKER. I would like to clarify the one point raised by Mr. Brewster. Insofar as industry is concerned, there is no control of the disposal of the 800, whatever number of planes there might be; when the industry decides to dispose of planes they dispose of them in the manner that they deem best to them, except those on the sport market?

Mr. HARDEEN. I think that is correct, sir.

Mr. BECKER. They scrap them or they sell them to small lines or dispose of them in the best manner possible except on the sport market, and we then have control by the State Department on the sport program.

Mr. HARDEEN. I think that is correct.

Mr. KILDAY. Thank you.

STATEMENT BY THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS

Mr. SANDWEG. We have another statement, if the subcommittee so desires. We may place it in the record. It is by the Board of Engineers for Rivers and Harbors. It is a backup of Mr. Allen's statement.

Mr. KILDAY. That will be done.

(The document is as follows:)

JULY 14, 1959.

Testimony for the Subcommittee for Transportation of the House Committee on Armed Services; to be used in connection with inquiry into the adequacy of transportation systems in support of national defense in event of mobilization.

The basic inquiry relating to the present status of waterways, and their adequacy in event of mobilization, has been answered by the United Secretary for Transportation.

The information which follows is primarily statistical and explanatory. Thus:

1. What do we mean by the term "waterways"?

The term includes the waterway transportation systems from entrance to river or harbor, and is usually segregated into four categories:

(*a*) Coastal deep-draft harbors.
(*b*) Great lakes harbors and connecting channels.
(*c*) Inland waterways for barge navigation.
(*d*) Shallow draft harbors for small boat navigation.

2. What is the status of the first category—coastal deep-draft harbors?

Table 1 lists our major ports and gives the depths authorized or recommended, and the actual controlling depths as given in the annual reports of the Chief of Engineers for 1957 and 1958. The table also shows which ports handled the three bulk imports of largest total volume; iron ore, bauxite, and petroleum. The data reveal that the major harbors on the Atlantic and gulf coasts generally provide navigable depths of 35 feet, ranging to 45 feet in New York. On the Pacific coast, depths of primary harbors are generally from 35 to 40 feet.

All deep-draft harbors and the entrance channels are maintained and improved by the Corps of Engineers at the direction of the Congress. This does not preclude local authorities from undertaking similar work, and sometimes they do, on approval of plans by the Department of the Army.

Non-Federal interests are wholly responsible for providing terminal facilities—the means to unload, to store, and to transfer the cargo to and from the land transport system. Terminal facilities are constantly being bettered. In fact, we find that our surveys of port facilities now conducted at about 10-year intervals are frequently outmoded in much less time than that.

Data relating to wharfage facilities, and to numbers and types of U.S.-flag vessels serving our ocean ports are furnished as table 2. For evaluation, that same table gives similar data—as of 1957—for the Great Lakes and inland waterway fleets.

3. What is the status of the Great Lakes harbors and connecting channels, which comprise the second category of the waterways system?

Thirty-seven major harbors on the Great Lakes have been improved for us by large ore-carrying vessels. The channels connecting the lakes have been dredged to provide 25 feet downbound but only 21 feet upbound. To provide access for loaded oceangoing vessels from the new St. Lawrence Seaway, Congress has authorized depths of 27 feet in the connecting channels.

That work is underway but will require funding for about 3 more years.

As to the Great Lakes harbors, comprehensive surveys are in process by the Corps. Several projects for deepening to 27 feet have been submitted to the Congress, and additional improvements undoubtedly will be recommended.

4. The third category of waterways systems is the "inland" system itself.

The latter term is frequently used, especially in statistical summaries, to incude all waterways. In its limited sense it refers to waterway systems other than the Great Lakes and the entrance channels to salt-water harbors. The Federal Government has improved about 22,600 miles of inland waterways; of this mileage 12,200 are at depths of 9 feet or more. The most important of the inland systems are:

(*a*) The Mississippi River and tributaries, comprising 5,300 miles of waterways with navigable depth of 9 feet or more and transporting 54.8 billion ton-miles of cargo in 1957; adding the deep-draft movement to and including Baton Rouge brings the total to 60.7 billion ton-miles.

(*b*) The Gulf Intracoastal Waterway, extending from Apalachee Bay, Fla., to the Mexican border, comprised of about 1,100 miles with navigable depths of 12 feet and moving 8.2 billion ton-miles in 1957.

(*c*) The Atlantic Intracoastal Waterway extending from St. Johns River, Fla., to Norfolk, providing a protected channel of 12 feet and moving 690 million ton-miles of commerce in 1957.

(*d*) The Chesapeake & Delaware Canal, linking the ports of Baltimore and Philadelphia having a depth of 30 feet (authorized for 35 feet) and handling about 451 million ton-miles of traffic in 1957. Also significant are the systems on the Warrior River in Alabama and the Columbia River in the Pacific Northwest.

5. The fourth category of the waterways system is the shallow-draft harbors.

Their importance lies primarily in use by the fishing and shrimping fleets and, secondarily, for sport fishing and pleasure boating. During an emergency those harbors become important as bases for search and rescue, training operations and the operation of miscellaneous auxiliary vessels.

As with ocean harbors and entrance channels, the Corps of Engineers plans, designs, builds, and maintains the Great Lakes harbors, connecting channels, and the inland waterways. Non-Federal interests usually provide rights-of-way and always furnish the terminal facilities.

6. How do those several elements of the waterways system compare in cargo movement, and what is the relationship to cargo handled by all modes of transportation?

Of the two measures of transport capability—tons and ton-miles—data on the former reveal:

(*a*) Coastal harbors: 555 million net tons in 1958, being a 133 percent gain over the average from 1935 to 1959. Both foreign and coastwise commerce are included.

(*b*) Great Lakes: 182 million tons in 1957, being a 75 percent gain over the base 1935–39.

(*c*) Inland waterways: 392 million tons, a gain of 121 percent.

(*d*) Total tonnage, 1,132 million tons, a gain of 118 percent over the 1935–39 average.

The foregoing comparisons were in tons; using ton-miles as a measure of the inland waterway traffic (excluding the Great Lakes), gives 114.6 million ton-miles, an increase over the 1935–39 base of 587 percent. This figure is much higher than the percentage increase in tonnage because of the longer hauls now prevailing.

The total cargo movements by waterways compares with other modes about as follows for the year 1957; the measure is percent of ton-miles of total intercity commerce:

	Percent
Rail	46. 31
Truck	19. 29
Pipeline	17. 21
Waterway	17. 15
Air	. 05

7. *Capability of expansion.*—The capabilities of ports and channels for expansion under emergency are often limited by the situation ashore, that is, by the berthing facilities, facilities for handling and storing cargo, and the land transportation complex. The emergency capability of the floating plant—ships, tugs, towboats, and barges—to handle additional cargo is especially significant since most carriers have capacity reserved for peak or seasonal load and for unbalanced directional flow of traffic. The corps has found that normal utilization of equipment on the inland waterways is about 65 percent of a hypothetical maximum; under emergency conditions utilization higher than 80 percent may be achieved.

The foregoing situation with regard to reserve capacity does not hold on the Great Lakes. In that area during a year of high industrial activity with accompanying high steel output, the fleet is used almost to theoretical capacity. Regarding ocean shipping, it is believed that vessels in the reserve fleet could provide significant additional tonnage.

As to the waterways, themselves, that is the channels, turning basins, harbors, and locks, there are some important bottlenecks. Examples are:

(*a*) On the Ohio and Warrior Rivers, locks and dams are outmoded and major replacement programs are underway.

(*b*) On the upper Mississippi a dam near St. Louis is needed to assure navigable depths during low water. This project has been authorized and is being funded.

(*c*) Enlargement of the Calument Sag channel connecting Great Lakes via the Illinois Waterway to the Mississippi River system. This project is also under consideration.

In addition to new construction and rehabilitation, of which the foregoing are but examples, there are places where additional maintenance is required; the Congress has been providing funds to reduce the maintenance backlog and is currently considering further requests in that category.

8. *Government regulations.*—Common carriers engaged in coastwise intercoastal, Great Lakes, and inland barge operations are regulated by the Interstate Commerce Commission. Operators of private vessels engaged in carrying captive cargoes are not subject to regulation, except for safety; while contract carriers are subject to minimum regulation. On inland waterways, private and contract carriers account for about 80 to 85 percent of the commerce. All U.S. vessels engaged in general commerce are subject to U.S. Coast Guard rules and regulations.

The Department of the Army is responsible to assure that the use of navigable waters is not impeded, and issues permits and regulations in connection therewith. The practices of the Corps of Engineers and the policies of the Congress are to promote waterborne commerce; current use of waterways would indicate the success of these policies and practices.

9. *Susceptibility of damage.*—The susceptibility of our waterways to damage from nuclear attack depends to a large degree on the number and type of structures involved. Open water navigation would not be completely disrupted by limited nuclear attack although floating plant transiting such waterways would be damaged. Thus, navigation on the lower Mississippi River itself, which is open-river, could be interrupted by destroying bridges, but service could probably be restored within days or weeks by clearing and bypassing. The same applies to the Gulf and Atlantic Intracoastal Waterways. However, connections, such as the tie-in of the Gulf Intracoastal Waterway to the Mississippi River at New Orleans, are vulnerable because of the locks involved. Elsewhere, slack water navigation made possible by locks and dams would be seriously impaired for long periods of time by destruction of such facilities.

Examples are the upper Mississippi and Ohio River systems, the Soo locks and Canada's Welland Canal on the Great Lakes, and the locks and dams of the St. Lawrence Seaway.

As to the capability to restore waterways after attack, we note: The engineering and construction capability of the corps—coupled with its know-how and state of readiness for action in event of flood emergency—assure that restoration will be vigorously and skillfully undertaken. However, the restoration of a lock site destroyed by a nuclear weapon would possibly require the design and construction of new locks—as a guess this would require many months, probably years.

Studies as to probable time of reconstruction under emergency conditions have not been made, insofar as I can determine.

With respect to coastal ports, since all U.S. ports are tidal, or open, and require neither wet docks nor locks, such ports would be more readily repairable than slack-water navigation projects. This appraisal is without consideration of problems of contamination. Nevertheless, a particular coastal port could be rendered useless for a long period by destruction of the supporting structures. The existence of many ports widely dispersed along the coasts of the Nation offers alternative routes for the dispatch and receipt of commerce, but the flexibility in their use diminishes as the size of the vessels increases, as is presently the situation for carriers of strategic cargo.

10. Summary.—(*a*) The channels, rivers, and harbors provide about one-sixth of our transport, measured on a ton-mile basis.

(*b*) Use of our waterways during 1957 was more than twice the average from 1935–39, measured on a tonnage basis.

(*c*) The most significant gain in ton-miles of commerce was achieved by the inland waterways—Great Lakes excluded—being nearly six times greater than the 1935–38 base.

(*d*) The rapid expansion in use, resulting in different types of floating plant as well as increased density of traffic, has created bottlenecks; the most important of those are being eliminated or improved by the corps as funds are provided.

(*e*) Many elements of the waterways system could rapidly expand their capacity in event of mobilization; this is especially so for open-river navigation.

(*f*) Government policies and practices engender the utilization of waterways for commerce.

(*g*) Vulnerability to limited nuclear attack varies; traffic on open-river systems probably could be restored quickly, whereas the restoration of locks might require more than a year. In any emergency the corps—with engineering and construction organizations in all regions of the 49 States and Hawaii—has the capability to act skillfully and rapidly in effecting emergency repair.

(Foregoing was furnished by the Board of Engineers for Rivers and Harbors, Building T–C, Second and Q Streets SW., Washington, D.C.)

TABLE 1.—*U.S. ports 35 feet or more depth authorized, recommended, or controlling with notation on selected imports*

Location	Depths					Receives imports of—		
	Authorized		Recommended		Controlling	Iron ore	Bauxite	Petroleum
	Feet	Year	Feet	Year	Feet			
Portland Harbor, Maine:								•
Lower main harbor	35	1917			29.3			
Upper harbor to Boston & Maine Railroad bridge	35	1946			35.0			
Portsmouth Harbor, N.H.	35	1954			37.0			•
Boston Harbor, Mass.:						•	•	•
Entrance	40	1917			39.0			
Main ship channel	40	1935			37.0	•		•
Mystic River	35	1950			31.8	•	•	•
Weymouth Fore River	32	1954			29.0			•
Town River	27	1954			27.0			•
Reserve channel			35	1935	30.0			

TABLE 1.—*U.S. ports 35 feet or more depth authorized, recommended, or controlling with notation on selected imports*—Continued

Location	Depths					Receives imports of—		
	Authorized		Recommended		Controlling	Iron ore	Bauxite	Petroleum
	Feet	Year	Feet	Year	Feet			
Fall River Harbor, Mass.	35	1946			35.0			•
Providence River and Harbor, R.I.	35	1937			(1)			•
New Haven Harbor, Conn.	35	1946			29.0–35.0			•
Bridgeport Harbor, Conn.	30	1945			(1)			•
Port of New York:								
Entrance, Ambrose Channel	45	1937			44.0			
Bayside-Gedney	35	1935			35.0			
New York and New Jersey Channels	35	1935–50			28.0–35.0		•	•
Newark Bay	35	1945			30.0–35.0		•	•
East River	35	1917			20.0–35.0		•	•
Lower part	40	1917						
Delaware River:								
Trenton, N.J., to Newbold Island	35	1954			13.8			
Newbold Island to Allegheny Ave.	40	1954			23.4			
Philadelphia to the sea:								
Allegheny Ave. to Navy yard	37–40	1954			32.5	•	•	•
To sea from Navy yard	40	1938			38.2			
Schuylkill River, 3½ miles	33	1946			25.0	•	•	•
Inland Waterway, Delaware River to Chesapeake Bay	35	1954			23.1	•	•	•
Baltimore Harbor and channels	39	1945	42	1957	35.0	•	•	•
Norfolk Harbor, Va.:								
Hampton Roads:								
Entrance	40	1917			35.1			
Elizabeth River to Navy yard on South Branch	40	1917			38.2			
Above Navy yard	35	1948			30.2			
Morehead City Harbor, N.C.:								
Across bar	30	1937	35	1954	30.0			
Inner channel	30	1937	35	1954	27.5			•
Wilmington Harbor, N.C.:								
Ocean-bar channel	35	1950			33.2			
Inner channel to basin	34	1950			27.6		•	•
Charleston Harbor, S.C.:								
Entrance	35	1940			35			
Inner	35	1940			34		•	•
Savannah Harbor, Ga.:								
Bar channel	36	1945			33			
Inner channel	34	1945			29			
Jacksonville Harbor, Fla.:								
Entrance	34	1945			28.8			
Inner channel, natural depths of over	34	1945						•
Port Everglades, Fla.:								
Entrance	35	1930	40	1958	(1)		•	•
Inner channel and basin	35	1930	37	1958	(1)			
Tampa Harbor, Fla.: Gulf to Port Tampa	36	1950			30.3			
Port St. Joe Harbor, Fla.:								
Entrance	37	1954			32.0			
Inner	37	1954			33.5			
Mobile Harbor, Ala.:								
Bar channel	42	1954			38.0			
Bay channel	40	1954			36.0			
River channel	40	1954			31.0			
Mississippi River:								
Seaway Canal	36	1956				•	•	•
Southwest Pass Bar							•	•
Channel	40	1945			35.0		•	•
Through New Orleans to Baton Rouge	35	1938			35.0		•	•
Calcasieu River and Pass:								
Entrance	35–37	1946			33.0			
Inner or river	35	1946			33.0			

[1] Not available.

TABLE 1.—*U.S. ports 35 feet or more depth authorized, recommended, or controlling with notation on selected imports*—Continued

Location	Depths					Receives imports of—		
	Authorized		Recommended		Controlling	Iron ore	Bauxite	Petroleum
	Feet	Year	Feet	Year	Feet			
Sabine-Neches Waterway, Tex.:								
Outer bar channel	37	1946			38.0			
Jetty channel	36–37	1946			34.0			
Channel	36	1946			36.0			
Port Arthur Canal	36	1946			35.0			
Sabine-Neches Canal	36	1946			33.0			
Galveston Harbor and Channel, Tex.:						•		
Outer	38	1948	42	1958	37.0			
Entrance	36	1948	40	1958	36.0			
Inner	36	1948			33.0			
Texas City Channel, Tex	36	1948			36.0			
Houston ship channel, Texas	36	1948	40	1958	30.0	•		•
Freeport Harbor, Tex.:								
Outer	38	1950			33.0			
Inner	38	1950			30.0			
Matagorda ship channel, Texas	9	1937			9.0			
Outer bar and jetty channel	38	1958			(2)			
Inner channel	36	1958			(2)			
Port Aransas-Corpus Christi Waterway, Tex.:								
Outer bar	38	1948	42	1958	38.0		•	•
Jetty channel	38–36	1948	42–40	1958	39.0			
Inner channels to Tule Lake	36	1948	40	1958	29.0			
La Quinta Channel	36	1958			36.0			
Viola Channel	40	1958			(2)			•
Brazos Island Harbor, Tex.:								
Pass channel	38	1950			36.0			
Inner channels and basins	36	1950			29.0			
Los Angeles and Long Beach Harbors, Calif.:								
Entrance	40	1935			40.0		•	•
Inner harbor channels	35	1935			32.0			
San Diego Harbor, Calif.:								
Entrance	40	1930			40.0			•
Inner or bay channel	35	1935			35.0			
Humboldt Harbor and Bay, Calif.:								
Bar and entrance channel	40	1952			32.0			
Inner channels	30	1952			30.0			
Port of San Francisco, Calif.:								
Bar	50	1935			43.5		•	•
San Pablo Bay and Mare Island Strait	35	1917			31.0			•
Richmond Harbor	35	1954			31.0		•	•
Oakland Harbor							•	
Bay to Army Base	35	1945			26.0			
Redwood City Harbor	30	1945			26.1			
Nawiliwili Harbor, Hawaii:								
Entrance	40	1954			39.0			
Basin	35	1919			33.0			
Kahului Harbor, T.H.	35	1919						
Kawaihae Harbor, T.H.:								
Entrance	40	1950			40.0			
Basin	35	1950			35.0			
Honolulu Harbor, Oahu, T.H.:								
Entrance	40	1935			43.0			
Channel and basin	35	1946			30.0			
Hilo Harbor, T.H.:								
Entrance	35	1912			35.0			
Basin	35	1925			34.0			
Port Allen Harbor, T.H.	35	1935			(1)			
Columbia River, Oreg. and Wash.:								
Bar channel	48	1954			47.0			
Channel to Portland	35	1935			33.0–35.0		•	•
Skipanon Channel	30	1930			22.0			

[1] Not available.
[2] Not started.

TABLE 1.—*U.S. ports 35 feet or more depth authorized, recommended, or controlling with notation on selected imports*—Continued

Location	Depths					Receives imports of—		
	Authorized		Recommended		Controlling	Iron ore	Bauxite	Petroleum
	Feet	Year	Feet	Year	Feet			
Yaquina Bay and Harbor, Oreg.:								
Entrance	40	1958			20.0			
Channel	30	1958			20.0			
Coos Bay, Oreg.:								
Entrance	40	1946			33.0			
Channel	39	1946			27.0			
Bellingham Harbor, Wash	30	1958			23.1			•
Lake Washington ship canal, Washington	34	1922			25.2		•	•
Seattle Harbor, Wash.:								
Natural depths in excess of	35							
East and west waterways	34	1919			25.8-34.0			
Tacoma Harbor, Wash								•
City waterway to 11th St	29	1902			29.0			
Hylebos Waterway	30	1930			28.3			
Port Industrial (Wapato) Waterway	30	1954			30.0			
Grays Harbor and Chehalis River, Wash	30	1945			27.9			
Petersburg Harbor, Alaska	24	1935			(1)			

[1] Not available.

TABLE 2.—*Data on wharfage facilities and U.S.-flag fleets operating or available for operation in 1957*

Waterway	Wharfage facilities		U.S. fleet							
			Dry cargo vessels			Tankers			Tugs and towboats	
	Depth alongside, feet	Number of piers, wharves, and docks	Number	Horsepower	Cargo capacity, tons	Number	Horsepower	Cargo capacity, tons	Number	Horsepower
Coastal ports	30	1,450	1,220	5,000,000	7,529,000	[1] 489	2,653,000	[1] 7,146,000	2,317	1,081,300
Great Lakes ports	21	312	515	868,000	4,053,000	32	46,000	127,000	322	192,600
Inland waterways	9	1,400	8,348	[2]	7,408,000	1,672	[2]	2,547,000	1,852	1,227,000

[1] By way of perspective it has been estimated that the fleet of oceangoing tankers, of 2,000 gross tons and over, that is controlled by U.S. private interests consisted, on Dec. 31, 1957, of 724 vessels of 14,176,000 deadweight tons. This includes both U.S.-flag tankers and tankers owned by U.S. interests but operated under foreign registry.

[2] Non-self-propelled barges.

TESTIMONY OF HERMANN BRETSCH, CHIEF, EMERGENCY READINESS DIVISION, FEDERAL AVIATION AGENCY

Mr. SANDWEG. There is an indication that someone from the Federal Aviation Agency would be available as a backup witness for Mr. Allen.

Mr. KILDAY. Will you give the reporter your name.

Mr. BRETSCH. I am Hermann Bretsch, Federal Aviation Agency, here to support the Secretary's statement. The Federal Aviation Agency has indicated its willingness to appear before this committee, if the committee so desires, in connection with other problems than those taken up by the Secretary's statement.

I would like to say that the Federal Aviation Agency is concerned primarily with problems of safety and adequacy of equipment in air transportation. We do not have any economic role in the sense that the Civil Aeronautics Board regulates the economy of the air transportation field. Nor do we have any role in determining for what purposes the aircraft shall be flown. Our role is that of determining that such aircraft as are operated are safe, airworthy, they are operated by technically competent people, and that they are maintained in satisfactory airworthy condition.

The civil aviation industry, I think you will agree, is one of our primary natural resources. In peacetime it plays a very large and growing role in the economy, and in time of war its contributions would undoubtedly be critical to the national defense effort.

The airlines are now the largest common carrier of intercity passengers in the United States. They account for more intercity passenger-miles than either the railroads or buses. And this passenger capacity is increasing by leaps and bounds, as you have heard in the previous testimony. The turbine-powered aircraft now on order, for example, plus the existing fleet, would be capable, assuming there were no retirements or attrition, of producing about 107 billion seat-miles in fiscal year 1962. Compared to the 1957 figures that we have been dealing with, that was 50.7 billion seat-miles. So this is more than a 100-percent increase potential in available seat-miles that we could have by 1962.

In the event of a mobilization during this conversion period, it appears that the airline fleet, therefore, could simply, by discontinuing retirements, provide for a very greatly increased passenger-carrying capability. This is obvious. If mobilization comes, this is a period in which we are in a very favorable situation, insofar as equipments are concerned.

I might also say that the condition, the physical condition of the fleet, is very good. It is operated and maintained in accordance with strict standards of safety, promulgated and administered by the Federal Aviation Agency.

If the committee has any questions, I would be glad to attempt to answer them, or to provide material in support of our position.

Mr. VAN ZANDT. In the event of an emergency, would the FAA organization and the system that it operates continue, or would it merge in the military?

Mr. BRETSCH. The Federal Aviation Agency operates the Federal Airways System, which serves both the civil and military aviation. Under the Federal Aviation Act of 1958, the Administrator is required to give full consideration to the requirements of national defense from the total planning and management of that agency. This is done in very close coordination with the Department of Defense.

Under the Federal Aviation Act we have joint military-civil staffing within the agency to insure that in our internal operations and planning the requirements of the national defense are adequately taken care of. In time of war I think it would be safe to assume that under section 302 of the Federal Aviation Act, in which the President is authorized to make the full resources of the Agency available to the Department of Defense, in support of the national defense, that we would operate in some form as an adjunct of the Department of Defense.

Mr. VAN ZANDT. In other words, your military load would become greater and your domestic load would shrink, and the war needs would establish the priority that would be given to the military over the domestic?

Mr. BRETSCH. National defense requirements would be the top priority item, undoubtedly. There would, of course, be a great requirement for supporting civil air operations in, say, a postattack period, in which aircraft, for example, are ideally suited for the kind of problems that would arise in a postattack period. A nuclear attack on the United States would undoubtedly cause severe damage to all systems of transportation. But perhaps the air transportation industry is less vulnerable to complete disruption by attack, simply because the aircraft obviously need not follow any fixed routes. They can operate between any two available terminals. They can fly over or around damaged areas, including contaminated areas. These capabilities are inherent in the nature of the air transportation since the air, after all, is a sea that comes to every man's door.

Mr. COHELAN. How about jet aircraft, landing it?

Mr. BRETSCH. In the case of the jet aircraft it creates the particular problems requiring the support of these aircraft. As aircraft become more sophisticated, their flexibility is somewhat reduced, as, for example, in connection with the use of airports. However, in terms of the large number of aircraft, the 65,000 general aviation aircraft that could be enlisted in the civil portion of a postattack survival operation, this problem is not so serious. There are relatively few of these sophisticated aircraft.

Mr. COHELAN. You assume a piston-driven type aircraft in the civilian area?

Mr. BRETSCH. Yes. They continue to make up the greater portion of the general aviation fleet. Although there are a few Viscounts in the executive fleet, very few, though.

Mr. KILDAY. Anything further?

Thank you, sir.

Mr. SANDWEG. We have two other reports, since we are running out of time, the maritime status report submitted by Mr. Howard J. Marsden, of the Federal Maritime Board, and a further statement by Mr. Allen.

Mr. KILDAY. Those will be included at this point.

(The statements referred to are as follows:)

STATEMENT OF UNDER SECRETARY OF COMMERCE, JOHN J. ALLEN, JR.

As to the question concerning the present physical status of our waterways and their adequacy in the event of mobilization, the physical status is revealed by the following:

During calendar year 1957, the latest year for which data are now compiled, waterways carried 232 billion ton-miles of cargo. That figure is about one-sixth of all recorded traffic, and only 2 percent less than estimates of the intercity traffic hauled by the trucking industry. In addition to its quantitative importance, waterborne traffic has a qualitative significance. More than half of such traffic is fuel—coal and petroleum products—furnishing heat, power, and light to commerce, to industry, and to the homes and automobiles of the population at large. The second largest category of waterborne commerce—about 14 percent—is equally vital to defense, being iron ore, iron, and steel.

As to adequacy of waterways in event of mobilization, they have been improved since each of the last two wars, and the Congress is providing further improvement and maintenance. Channels, turning basins, and harbors have been deepened, widened, and extended; new locks have been provided at critical places. Local enterprise has cooperated, not only by providing rights-of-way, but especially in the development of terminal facilities. Wharfage has been expanded and cargo handling and storage capabilities greatly increased. The result of the combined efforts of Federal, State, and local governments and of private enterprise is evident in the great increase in cargo moved over the waterways during the past 10 years; the 232 billion ton-miles transported in 1957 is 58 percent greater than the movement during 1947.

Can this capability be expanded significantly in the event of mobilization? The question is to a large degree answered by examining the acceleration occurring during each of the last two wars. From 1940 to 1942, traffic on inland waterways measured on a ton-mile basis increased 26 percent. From 1949 to 1951, traffic increased 31 percent. In the event of mobilization today, and the restoring to service of plant economically obsolete but operable, would result in a similar increase. The waterways themselves, that is, the improved channels, the locks, and the harbors, are generally capable of sustaining such an increase. I say generally capable because there are restrictive features or bottlenecks. However, I am informed that the Corps of Engineers has plans for the relief of those restrictions and presents them annually to the Congress in the 6-year construction program of the corps and in its maintenance and operating budget.

There remains the question of vulnerability. I have access to no specific studies as to relative vulnerability of the different modes of transport. I believe we may state that many of the waterway courses would suffer under limited nuclear attack a disruption of shorter duration than would other means of moving cargo. Nevertheless there are critical points, such as locks, bridges, and dams, which are vulnerable to nuclear attack; destruction would undoubtedly block traffic affected by such facilities for extended periods of time. As to emergency restoration, the Corps of Engineers has construction plant and experienced personnel, and also maintains records as to availability of equipment owned by the construction industry. The corps' experience in national emergencies, and their state of readiness for flood and hurricane disaster, indicate a high capability for emergency restoration of damaged waterways.

Your committee inquires as to how governmental regulations and controls affect the well-being of transportation systems. Although some regulations may not satisfy all classes of carriers, the basic policies of the Federal Government have engendered the development of waterborne commerce. The tremendous expansion in recent years of the volume of cargo transported on our navigable waters is, in significant degree, fruit of the policies of the U.S. Congress and of the executive branch of the Federal Government.

(Foregoing was furnished by Board of Engineers for Rivers and Harbors, Building T–C, 2d and Q Streets SW., Washington, D.C.

Maritime Status Report, May 1, 1959

Prepared by the Joint MarAd-Navy Planning Group

1. Summary of requirements and availabilities [1]

(*a*) *General statement.*—(1) The United States is deficient in capability to meet national wartime requirements for merchant-type ocean shipping.

(2) Current deficiencies are both quantitative and qualitative, and applicable, in different degrees, to all three major categories of ships—passenger transports, dry cargo ships, and tankers.

(3) The present shortages, however serious, are less critical than the approaching block obsolescence of our passenger and cargo ships.

(4) Funds are not available nor budgeted to maintain our present capability.

(*b*) *Passenger-transports.*—The small initial numerical deficits in passenger transport capacity are considered manageable. It is strongly emphasized, however, that there are serious qualitative deficiencies, particularly as to speed, in the available transports.

(*c*) *Dry cargo ships.*—(1) The most serious numerical deficiencies during wartime occur in the category of dry cargo ships. The initial deficit is in excess of 200 national ships and the deficit in subsequent months will be substantially greater.

(2) Failure to replace obsolescent and overage ships with modern, high-speed ships will result in still greater deficiencies.

(*d*) *Tankers.*—A serious deficit in tanker capability will exist during mobilization now or in the immediate future, but currently scheduled construction is inadequate to overcome this shortage by the end of fiscal year 1962.

2. Recommendations (summarized) [2]

In order to alleviate the above stated situation, certain specific steps should be taken as follows:

(*a*) Provide funds to—

(1) Increase the strength of the subsidized fleet to the limits permitted under the Merchant Marine Act, 1936, as amended.

(2) Construct the two superliners now authorized.

(3) Maintain NDRF ships in an adequate state of preservation.

(4) Reconvert certain former amphibious transports to freighters.

(5) Build certain national defense features into early replacement ships.

(6) Scrap 1,030 Liberty ships.

(*b*) Maintain effective U.S. control over U.S. owned merchant ships now registered under so-called flags of convenience (Panama, Liberia, Honduras).

(*c*) Dispose of two reserve shipyards.

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[1] Detailed conclusions are contained in par. 4.

[2] Detailed recommendations are contained in par. 5.

3. Discussion

The considerations on which the above recommendations are based are given below:

(*a*) *General.*—(1) The indicated deficiencies, particularly in dry cargo ships are disturbing because of the possibility or probability that they cannot be eliminated or substantially reduced under existing law and in existing circumstances.

(2) Replacement of obsolescent ships merely maintains the present fleet strength without affecting the present numerical deficits.

(3) The reserve fleet will be increased temporarily to the extent that ships of serviceable types with some potential life left in them are traded in against new construction.

(4) Any trade-ins, together with the great majority of all ships in the active and reserve merchant fleets, will reach the 20-year age of obsolescence within the next 6 years. The precise effect of block obsolescence cannot be projected within narrow limits of time and numbers, especially with regard to the reserve fleet. The general principle applies that the residual life of the ships can be prolonged to some extent by spending sufficient money on maintenance and repair, but that sooner or later, and not much beyond the 20-year age of obsolescence, the whole war-built fleet must eventually be scrapped.

(5) Included in current Department of Defense estimates of availability are some 530 ships owned by U.S. citizens, but registered under so-called flags of convenience (Panama, Liberia, Honduras) and considered under "effective U.S. control." Determined efforts are being made by foreign shipping interests and governments, as well as international labor organizations, to cause U.S. owners to withdraw their ships from "flags of convenience." Any reduction of the tonnage under "effective U.S. control" by transfer to other foreign flag registry, or removal from effective U.S. control would increase present deficits.

(6) Under assumptions of nuclear warfare, damage to ship repair facilities and manpower casualties would cause substantial delays in Reserve Fleet activations. Accordingly, the national capability to meet military and essential civilian requirements for merchant shipping rests primarily on the strength of the active, operating merchant fleet on D-day. The feasibility of activating laid-up ships, however, depends, to a large extent, on the state of preservation and repair that has been maintained on the ships. In light of existing numerical deficits, it is obvious that elements of the Reserve Fleet, for which there is a mobilization requirement, should be kept in a state of readiness commensurate with activation capability.

(*b*) *Passenger transports.*—As previously indicated, there are small initial numerical deficits in passenger transport capacity, but the deficits are considered manageable, in part through the use of "hot bunking" and in part through the assumed availability of foreign-flag vessels. The speed deficiency of the transport segment of the merchant fleet is illustrated by the fact that only 16 of the 159 actual ships in this category have speeds of 20 knots or more. The greatest concentration by type is in 19-knot P–2's and 17-knot C–4's, of which there are 24 and 51 ships, respectively, representing over half of the total troop lift capability. These ships, together with the great majority of other smaller and slower types, were practically all built during World War II, and will be 20 years old within the next 5 to 6 years.

Comprehensive testimony on this subject was given before the House Merchant Marine and Fisheries Committee in the 85th Congress by Vice Adm. Ralph E. Wilson, Deputy Chief of Naval Operations for Logistics (tab A). Subsequently, the Secretary of Defense, Hon. Neil McElroy, wrote to Senator Carl Hayden, chairman of the Senate Committee on Appropriations, on the same general subject (tab B). The testimony of both Admiral Wilson and Secretary McElroy was in connection with the proposed construction of two superliners, the sister ship to the *United States*, and the superliner to be operated in the Pacific by the American President Lines.

Without attempting here to summarize all the material presented, the following salient points are noted:

(1) Vulnerability to submarine attack is significantly and progressively reduced as sustained speeds of 25 knots and above are attained.

(2) Today only three American commercial passenger ships—the *Constitution*, *Independence*, and *United States*—are capable of speeds of 25 knots or greater.

(3) Construction of the two new superliners will almost double our capability in that highly valuable speed range of 25 knots and above.

Construction of the two superliners was authorized by legislation passed by the 85th Congress but to date no funds have been appropriated for the purpose.

(c) *Dry cargo ships.*—(1) The estimated number of active freighters available includes 120 national foreign-flag ships under "effective U.S. control" together with the full strength of the privately owned U.S. flag fleet of dry cargo ships. The great majority of the "effective U.S. control" dry cargo ships are World War II Libertys. There is no assurance that these ships will be replaced when they become obsolete. Moreover, if any of the "effective U.S. control" ships should be removed from such control by transfer of flag or otherwise, the existing deficits would be correspondingly increased.

(2) If all eligible foreign-trade liner operations are subsidized, the trade-ins could add approximately 375 freighters to the reserve fleet. This, however, would be insufficient to offset completely the indicated deficits in the later months of general war, particularly as it is impossible to determine how many of these trade-ins would be in sufficiently good shape for wartime use.

(3) Some shrinkage of the U.S.-flag dry cargo fleet is to be expected, as for example, through lack of replacement of tramps and domestic liners. As of December 31, 1958, there were 86 privately owned freighters listed as tramps. Almost all of these were World War II Libertys. There were also 65 freighters listed as liners engaged exclusively in the domestic trades. These ships are in a weak position economically. Unless the tramps are subsidized, and unless the present high costs of handling break-bulk dry cargo in the domestic trades are greatly reduced, it is extremely doubtful if any substantial amount of new construction is to be expected in these categories.

(4) At the present time, the subsidized fleet totals 310 ships, of which 33 are combination passenger and cargo ships. Applications have been received for subsidized operations, requiring an estimated additional 130 ships. On the basis of voyages presently authorized, it would appear that about 70 additional ships can be subsidized. If authorization is granted for sufficient additional voyages, the remaining 60 ships could be placed in subsidized service. The total number of ships in the subsidized fleet would then be 440 ships.

This is the only segment of the merchant fleet over whose replacement the United States has any degree of authority or power of persuasion. In light of the critical deficit in dry cargo ships for mobilization purposes, first priority should be given to obtaining the funds required to subsidize all ships eligible under existing legislative authority.

(5) Heavy life ships: Mobilization requirements for the overseas movement of outsize military equipment such as tanks, missile launchers, and other rolling stock will require extra heavy lift booms. To meet this requirement, provision should be made to incorporate into at least four replacement ships the necessary structural modifications to permit the speedy and economical installation of heavy lift booms 100 to 150 tons capability when required.

(6) Roll-on-roll-off ships: There is a strategic need in peacetime, as well as wartime, for ships with roll-on-roll-off capabilities. Basic military strategy for both limited and general war requires mobility for Armed Forces. Roll-on-roll-off offers this mobility for the rapid deployment of wheeled and tracked vehicles. The ability to load or discharge equipment in a matter of hours instead of days is especially desirable in order to provide for the early "marry-up" with forces lifted by air.

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(*d*) *Tankers.*—(1) Despite the current worldwide surplus of tanker tonnage, it is reasonable to expect that tankers will be replaced with new construction on a timely basis as a matter of necessity and operating economy for their owners. No authority exists at the present time by which the incorporation of certain national defense features might be required in the construction of new tankers. The desirability of obtaining such authority by appropriate legislation is being investigated.

(2) As of December 31, 1958, approximately 54 percent of the available privately owned tanker tonnage, active and inactive, consisted of foreign-flag ships under "effective U.S. control"—430 national ships of 7,010,000 deadweight tons out of the total of 798 national ships of 13,072,900 deadweight tons. The loss of control of these tankers would seriously affect the total tanker capability.

(*e*) *Reserve fleet.*—The value of the reserve fleet in a given emergency or war situation depends, first, on the suitability of the laid-up ships for their wartime missions. Broadly, this means that certain types are superior to others in characteristics such as speed and capacity, giving them relatively less vulnerability to submarine attack, faster turnaround, and greater total lift. It is not entirely a matter, however, of speed and size. There are requirements for small ships to be used in local operations, and for special-purpose ships of several types. There is even a specific requirement for a certain number of Liberty ships necessary for specialized naval missions.

Second, the reserve fleet is of value only to the extent that it can be activated in time to perform its missions.

Under assumptions of general nuclear war, activation may be impeded by attack damage to repair facilities and by manpower casualties. In such a situation, the state of preservation of the ships would have a direct bearing on the amount of work required to put the ships in operating condition. Activations requiring extensive conversion or repair work might well be impossible of accomplishment.

With these factors in mind, the MarAd-Navy Planning Group has established a priority list of 922 ships for which there are definite mobilization requirements. (See attached tab C.) Prudent management of the reserve fleet would require that the ships on this priority list be maintained in full state of preservation. This will require funds for fiscal year 1960 totaling $6,588,000. The original request was limited by the Bureau of the Budget to a total of $4,900,000.

There are approximately 2,000 ships in the reserve fleet at present. Of these, and included in the prioity list mentioned above, there are 118 former freighters which have been converted to amphibious transports—APA's. Before conversion, 87 of these ships were Victory AP5's, 23 Victory AP2's, and 8 C3 freighters. The ships are no longer suitable for naval use as amphibious transports. They can be reconverted to Victorys and C3 freighters at an estimated average cost of approximately $1.5 million per ship.

In this connection, the modernization of 120 Liberty ships was previously recommended. This is not now thought to be as effective a solution to reserve fleet deficiencies as certain other potential conversions, including the reconversion of APA's to freighters. Reconverting the APA's to Victorys and C3's will produce better ships than modernized Libertys, for less money.

(*f*) *Reserve shipyards.*—Under assumptions of general nuclear war, no major reliance can be placed upon meeting requirements and replacing battle losses with new construction after D-day. The need for retaining national defense reserve shipyards and maritime reserve shipyards, therefore, has been considered by the Department of the Navy and the Maritime Administration. In reply to a question from the Maritime Administrator on this subject, the Coordinator of Shipbuilding, Conversion and Repair stated in a letter dated March 5, 1959, that the Navy is disposing of all wholly owned industrial reserve shipyards, with the exception of those at Tacoma, Wash., and Tampa, Fla. He recommended that the Maritime Administration retain two of the four maritime reserve shipyards.

In accordance with this recommendation, the Maritime Administration proposes to retain the reserve shipyards at Wilmington, N.C., and Richmond, Calif., and to dispose of the remaining two yards at Alameda, Calif., and Vancouver, Wash.

4. Conclusions

(a) *General.*—(1) Any reduction of tonnage under "effective U.S. control" by transfer to other foreign flags or otherwise made unavailable to the United States would increase the present deficits.

(2) The residual lives of the ships in the reserve fleet can be prolonged only to the extent that sufficient money is spent on maintenance and repair.

(3) Sooner or later, and not much beyond the 20-year age of obsolescence, the whole World War II-built fleet must be scrapped.

(4) Funds authorized in the past, and budgeted for fiscal year 1960, are inadequate to maintain the national defense reserve fleet in a state of acceptable material preservation.

(5) On new construction, the inclusion of features such as high speed, heavy lift booms, and roll-on/roll-off capability, as commercial assets, is highly desirable.

(b) *Passenger-transports.*—(1) Unless prompt steps are taken to correct the qualitative deficiencies in this category, particularly as to speed and age, unacceptably large losses in ships and personnel can be expected in the first few months of war.

(2) The prompt construction of the two new superliners now authorized will go a long way toward alleviating the qualitative deficiencies in transports.

(c) *Dry-cargo ships.*—(1) The trade-in of serviceable types against new construction, and the subsidizing of all eligible berth line operations, could add approximately 375 freighters to the reserve fleet. This would reduce but not eliminate the potential deficit in this category.

(2) Further shrinkage of the U.S.-flag active fleet is expected, through failure to replace obsolete ships in certain categories.

(3) The deficit in dry-cargo ships might be eliminated by subsidizing U.S.-flag foreign trade tramp operations, and/or undertaking a large-scale Government shipbuilding program, but these steps do not appear advisable at this time.

(4) There are some 1,300 Liberty-type cargo ships in the national defense reserve fleet, 1,030 of which are of little or no wartime value and should be scrapped. The remaining 270 are earmarked for special military purposes.

(5) It is important that provision be made for heavy lift capability (100–150 tons) in present or future construction programs.

(6) There is a strategic need in peacetime, as well as wartime, for ships with roll-on/roll-off capability.

(d) *Tankers.*—(1) A substantial deficit in tanker capability will exist in a mobilization situation preceding the outbreak of general war. This results from the increased civilian consumption of petroleum products, which, in turn, would cause a heavy demand for tankers. There is no worldwide shortage of tankers, however, and it may be assumed that part of all of this shortage could be eliminated by the use of foreign charters.

(2) Certain minor shortages of tankers will exist during subsequent phases of general war prior to the end of fiscal year 1962, but the deficits are considered manageable. It is anticipated that all tanker deficits will be eliminated by scheduled new construction by the end of fiscal year 1962.

(e) *Reserve fleet.*—Additional funds are required to maintain the 922 reserve fleet ships on the priority list in an acceptable state of preservation. The funds now budgeted for fiscal year 1960 are sufficient for preservation of only half of the priority list ships.

(f) *Reserve shipyards.*—Two of the four maritime reserve shipyards can be disposed of.

5. Recommendations

The following recommendations are considered the minimum essential steps which can be taken immediately to retain a measure of merchant fleet capability. Their adoption will not necessarily reduce or eliminate the indicated deficits, but may prevent the deficits from becoming greater.

(*a*) *Funds should be provided to*—

(1) Increase the strength of the subsidized fleet to the limits permitted under the Merchant Marine Act, 1936, as amended.

(2) Proceed with the construction of two superliners authorized by the 85th Congress.

(3) Keep priority list reserve fleet ships in full state of preservation.

(4) Provide for reconversion of reserve fleet APA's to VC–2 and C–3 freighters at the rate of 20 ships per annum.

(5) Include high speed, heavy lift booms, roll-on/roll-off capability and modern cargo-handling equipment in early replacement ships, even though national defense feature allowances may be required.

(6) Continue disposal at optimum annual rate of reserve fleet Liberty ships for which there is no requirement.

(*b*) Every effort should be made to avoid loss of "effective U.S. control" over foreign-flag ships owned by U.S. citizens.

(*c*) Disposal action for two of the four maritime reserve shipyards should be initiated.

Approved May 2, 1959.

Assistant Secretary of the Navy (Material)

Maritime Administrator

TAB A

STATEMENT BY THE DEPUTY CHIEF OF NAVAL OPERATIONS FOR LOGISTICS

Mr. Chairman, I am Vice Adm. Ralph E. Wilson, Deputy Chief of Naval Operations for Logistics. I appear today as a witness for both the Navy Department and the Department of Defense.

I welcome this opportunity to discuss the emergency passenger ship requirements of the Department of Defense. Our interest in passenger ship construction is based on the need for modern, high-speed ships capable of being used as troop transports in times of national emergency.

Bills H.R. 9342 and H.R. 9432, introduced by the chairman, and similar bills authorize the construction of a superliner to replace the SS *America* and the construction of a passenger vessel for operation in the Pacific. Both of these new ships will significantly reduce our qualitative deficiency in troop transport potential. Their earliest completion will, therefore, make an important contribution to improving our national defense posture.

In the event of a national emergency, the military would have an immediate need for a number of troop transports. Depending on the gravity of the situation and the time factors involved, this need might not be met by ships now available to us. It is easy to visualize situations, even short of general war, where demands for the rapid mass movement of people would exceed our present military capability. This could well become a race against time to evacuate nationals, to redeploy forces, or to augment existing forces overseas. For such purposes a significant increase in our limited reserve capability in high-speed passenger ships under the American flag will be of great value.

There will be an urgent need for merchant shipping even in the event of an initial devastating nuclear exchange. Shipping active on the high seas would stand a good chance of surviving the initial onsluaght. Many vitally important tasks will remain to be done. These may include military occupation of enemy territory, continued support of allies, and transportation for our own economic rehabilitation. Heavy damage to our industry and lack of time would prevent the construction of sorely needed shipping. We would have to carry on with what we have on hand.

The question may arise as to whether our calculations of shipping needs for general war have taken into consideration the capabilities of our allies and the

magnitude of multilateral commitments to the NATO pooling concept. The answer is a qualified "Yes."

The United States has entered in all sincerity into NATO planning for the pooling of merchant shipping. We intend to abide by our commitments in the event of a NATO war. It appears most probable that the national requirements of other NATO nations would exceed their combined shipping capabilities.

Additionally, many foreign-flag passenger ships have marginal endurance under heavy loading conditions. It must be pointed out, too, that the NATO Defense Shipping Authority is not expected to become fully operational until 2 or 3 months after the outbreak of war.

Meanwhile, our immediate need for efficient transports must be filled from U.S.-flag shipping.

Of utmost significance in this connection is that the United States must be prepared for emergencies other than all-out war and a NATO war. We have interests in many areas of the world that fall outside the NATO sphere of planning.

We must also recognize that under various circumstances which might arise, the policies and views of the United States would not necessarily coincide with those of our many allies in each and every crisis. The lessons of history have taught us that, as a matter of fundamental policy, our primary reliance must continue to be placed on capabilities under our direct control.

Present planning indicates that by a combination of employing active passenger type vessels and activating additional ships from the national defense reserve fleet, we could meet our minimum needs for troop transport in the event of general war. We have enough ship space to provide the required initial lift.

This determination is valid, however, only on a quantitative basis. Unfortunately, the majority of our ships are old. Most of them are deficient in speed and lacking in other features that are important in minimizing the hazards of moving troops by sea. The use of many of them under modern war conditions would involve a high degree of risk which can be significantly reduced by the construction of modern high speed ships.

America's active and reserve inventories of passenger type vessels add up to a total of 156 actual ships, ranging in age from 5 to 30 years. Of these, 56 ships are limited to a top speed range of 15½ to 16½ knots, have an average age of 14 years, and represent a combined emergency capacity for about 56,000 troops. Sixty-one ships have a top speed range of 17 to 17½ knots, average age of 15 years and a combined emergency capacity for about 163,000 troops.

There are three ships of 18 knots that are 30 years old and have a combined emergency capacity for about 4,000 troops. We have 24 ships in the 19-knot bracket, including 16 MSTS transports which can do 20 knots in a pinch. However, to call them 20-knot ships would be stretching a point. They have an average age of 13 years and a combined emergency capacity for about 81,000 troops.

Deduction leaves 12 actual passenger-type ships that are capable of 20 knots or more. They represent combined emergency capacity for about 33,000 troops, but five of these ships are over 25 years old and are lacking in several defense features.

In fact, our existent, fully modern troop-lift potential amounts to only six ships—three converted 20-knot *Mariners*, the 25-knot *Constitution* and *Independence*, and the 33-knot *United States*, which add up to a total emergency capacity for about 14,000 troops—enough for one streamlined division.

Ships under construction include two passenger vessels for Grace Lines and two for Moore-McCormack Lines. As with the converted *Mariners*, they meet the minimum speed requirements for modern troop transport. The four ships will provide a total emergency capacity for about 5,000 troops. These ships do include many improved design features, and they will contribute appreciably to the quality of our total troop lift potential.

World Wars I and II proved that the submarine is a deadly enemy of merchant-type ships. The Soviet submarine force has reached a strength of over 450 submarines, which is greater than the rest of the world navies combined, and the largest submarine force in world history in peace or war. Because of a concentrated building program commencing in about 1950, the greater percentage of these are new, long range units of modern design.

By contrast, the Germans had only 57 submarines in operation at the beginning of World War II. The impact of this numerical comparison is ominous. With a few notable exceptions, a steadily growing submarine menace is compounded by a relative stagnation in merchant ship development and the consequent increase in the vulnerability of our shipping.

The vulnerability of merchant ships to submarine attack can be reduced in some measure by certain built-in national defense features. The more important of these are—

(*a*) Speed.
(*b*) Compartmentation for damage control.
(*c*) Increased fire and shock resistance.
(*d*) Extra endurance and cruising range.
(*e*) Defensive armament and equipment.

Each of these defense features is valuable. The importance of speed cannot be overemphasized. Speed is the best passive defense that merchant-type ships can employ against hostile submarines. The faster the target, the more difficult it is to hit with submarine torpedoes, and the more difficult it is for a submarine to get into position for launching a torpedo attack. These are simple derivations from the laws of probability.

An added advantage of high speed is the flexibility in routing. Fast ships can be operated independently over more devious routes than is possible in convoy operations. This permits them to avoid known concentrations of submarines without undue loss of voyage time.

In the past war it was standard doctrine among naval shipping control authorities that a ship capable of 18 knots or more should normally be employed as an independent, rather than in convoy. This speed criterion is no longer valid, due to developments in submarine performance and the overall magnitude of the submarine menace.

Today it is not considered prudent to permit independent routing of any ship not capable of a sustained speed of at least 20 knots. Even at this minimum speed there is considerable risk involved.

Detailed studies indicate that ships capable of speeds up to 24 knots are, in certain situations, as susceptible to attack by submarines capable of sustained high speed submerged as was a 13-knot ship during World War II. There is no magic speed figure that guarantees complete immunity to submarine attack.

In transiting known or probable focal points of submarine menace, even the fastest ships would require additional protection, but this does not reduce the value of high speed as an effective passive means of protection.

Our studies show that with increases in speed above 25 knots the proportionate reduction in vulnerability definitely pays off. High speed design is expensive, but it will prove of great value in time of war. The importance of speed will increase as submarine development advances.

In emphasizing the value of speed, the importance and value of other built-in national defense features should not be obscured. Many of them also serve to improve the commercial quality of a vessel, especially as regards safety and reliability. High standards of compartmentation reduce the vulnerability to enemy hazards by localizing damage; the spread of flooding into undamaged compartments is prevented, and a substantial margin of buoyancy is thus assured.

Special preservative coatings, minimum use of wood, and other preventative measures increase a ship's resistance to fire damage. Carefully designed shock mountings reduce the possibility of breakdown of essential machinery under enemy attack. Certain preparatory structural work is accomplished, such as foundations and adaptations, with a view to wartime installation of armament and other defensive equipment.

Endurance adequate to fulfill a ship's primary mission is a vital factor in wartime. Maximum endurance is required in ships whose mission entails long

extended periods of steaming at sea. All types of major warships and submarines fall in this category.

Transports and those logistic support type ships whose mission involves point to point transportation should possess sufficient endurance to make round trip voyages at maximum sustained speed. Many of our available transports do not possess sufficient endurance to fulfill their mission.

The requirements of endurance include the additional fuel capacity requisite to extended cruising range at high speed. The size of distilling plants, the storage space for dry and refrigerated provisions, the capacity of electrical distribution systems, and many other features are also important considerations in regard to endurance.

The development of nuclear power represents a great advance in ship propulsion, particularly because of unlimited endurance. Nuclear propulsion in a man-of-war is of inestimable value as it insures a comparatively unlimited cruising range and enables a major warship or submarine to remain in its operating area for extremely protracted periods of time. As you know, the Navy has undertaken a long-range program for the application of nuclear power to surface ships, as well as submarines To date, 19 nuclear-powered submarines and 2 nuclear-powered surface ships have been approved and funds appropriated for their construction.

Not only is nuclear propulsion presently very expensive to construct; it is also costly to operate. Navy experience and estimates show that the operating fuel cost of nuclear-powered ships is considerably greater than that of similar ships fitted with conventional propulsion.

It is noted that bill H.R. 9654 would incorporate nuclear propulsion in the replacement for the SS *America*. We do not believe that this action would improve either the commercial or defense utility value of this vessel by sufficient margin to warrant the disproportionate increase in the initial cost and the operating costs.

A passenger ship, even when used as a transport, is essentially a point-to-point carrier. For such employment, adequate endurance can be achieved without resort to the high premium cost of nuclear power. For example, the cruising range of the SS *United States* is fully adequate for emergency purposes. The high pressures, high temperature steam powerplants originally proposed represent the most efficient and most modern design of steam propulsion, and can be installed in the minimum of construction time. The incorporation of nuclear propulsion would most likely necessitate considerable extensions in the design and building periods. Until further developments make nuclear powerplant costs competitive with oil, we do not recommend the application of nuclear propulsion to ships of this type.

I have given you only a brief résumé of "national defense features." Basically they are improvements and refinements in design, above normal commercial standards, that make a ship more sturdy, more capable, and more reliable, particularly under wartime conditions. These features not only improve a ship's performance and her ability to evade attack; they also enhance a ship's capacity to absorb an enemy attack and survive. They reduce her requirements for logistic support.

The replacement for the SS *America* and the passenger vessel for the Pacific will have designed speeds of about 33 knots and 28 knots respectively. As in the case of the SS *United States*, the design of both ships will include speed above commercial requirements built in for defense purposes. These new ships will incorporate the maximum in safety and reflect the most modern national defense features. Their comfortable cabin spaces, designed for approximately 2,000 and 1,500 passengers respectively, will be convertible to troop accommodations with utmost ease and a minimum of delay.

Even without any conversion, these new ships could respond quickly and effectively to an urgent demand in the event of emergency. Under such conditions the two ships would have the capability to evacuate a combined total of 7,000 mixed civilians and dependents or to redeploy a combined total of 9,500 troops. By relatively rapid conversion, their capacities could be increased to ultimate totals of 14,000 and 10,000 troops respectively.

The prosecution of war utilizes all the resources of our Nation. Our entire industrial potential is intermeshed into our overall national defense posture. To project our military power overseas and support sustained combat operations, our Armed Forces would rely heavily upon American industry—and the maritime industry, as in the past, would play a key role.

We are fortunate that we have laws and policies that are designed to both encourage and develop a strong maritime industry. It is most opportune for national defense that these two superior ships are proposed for construction under the logical policies of existing law for the primary purpose of furthering our maritime commerce and maintaining the prestige of our American merchant marine.

While I have stressed the need for these ships in emergencies, there is an advantage in having additional U.S.-flag passenger capability to provide for peacetime military requirements. Many of the transports operated by the Military Sea Transportation Service are poorly appointed for peacetime troop movements. Additional commercial passenger capability would make it possible for MSTS to utilize its better transports more effectively and inactivate the less desirable ships. Such action would effect a more economical operation and, at the same time, provide additional support for the privately owned merchant marine. At present, U.S. commercial lines can only make an appreciable amount of space available to MSTS in the so-called off season. Because of this, MSTS is compelled to operate a greater number of ships than would otherwise be necessary.

In summary, for the reasons set forth above, the Department of Defense desires to emphasize the urgent need for the construction of modern passenger ships. These two ships have been under discussion for about 2 years and will require about another 3 years to build, once approved. The financial and contractual details of the various proposed bills are matters of Department of Commerce cognizance. While deferring to the Department of Commerce in regard to such business aspects, the Department of Defense fully endorses the enactment of legislation which will authorize the prompt construction of these modern passenger ships.

TAB B

MARCH 2, 1959.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations, U.S. Senate.

DEAR MR. CHAIRMAN: In your letter of January 26, 1959, to the Secretary of Defense, you stated that your committee desires to be advised of the present attitude of the Department of Defense as to the military necessity for the construction of large transport-type commercial ocean liners. This pertains particularly to the two high-speed passenger ships which were authorized during the last session of Congress.

You expressed interest in the effect that the President's budget message and recent rapid technological advances, including such weapons as the Polaris submarine, may have on the Department's attitude with respect to the need for such vessels.

Advances in technology have served to emphasize the need for more high-speed passenger ships adaptable to immediate employment as troopships. This deduction is valid for concepts of both general war and limited peripheral war in which we can foresee the possible need to transport many troops that could not be airlifted.

The Deputy Chief of Naval Operations (Logistics), Vice Adm. R. E. Wilson, in his testimony before the Congress last year pointed out the great value of high speed as the best defense that merchant ships can employ against an enemy. The faster the ship, the less vulnerable it is to torpedo attack by modern submarines or to guided missile attack. While technological advances of an enemy increases the vulnerability of our merchant shipping, that vulnerability is always less for fast ships than for slow.

A recent study completed by the Navy subsequent to Admiral Wilson's testimony confirms that vulnerability to submarine attack is significantly and progressively reduced as sustained speeds in excess of 25 knots are attained. Today only three American commercial passenger ships—the *Constitution*, *Independence* and *United States*—are capable of speeds of 25 knots or greater.

Present studies indicate that active Military Sea Transportation Service transports and active passenger-type ships, augmented by additional transports from the national defense reserve fleet, would be sufficient to meet our minimum needs for troop transport in the event of general war. This determination is valid, however, only on a quantitative basis. Unfortunately, the majority of our ships

are old or approaching obsolescence. Most of them are deficient in speed and lacking in other features that are important in minimizing the hazards of moving troops by sea. The use of many of them under modern war conditions would involve a high degree of risk.

To the degree commensurate with military operational readiness, it is preferable that defense requirements for sealift capability be satisfied by ships which are privately owned. Such ships can be employed in peacetime in profitable commercial trade and at all times be immediately available for defense. This availability will influence the degree of construction and operation of Government-owned transports by the Military Sea Transportation Service. This is sound logic—and far less costly to the Government in the long run.

The value of these ships as immediately available capability depends largely upon their commercial success. For this reason we feel that they should be justified primarily on the basis of the national maritime policy. Their undoubted potential value as wartime troop transports should be a related justification.

The method of financing the ships mentioned in the President's budget message is not within the purview of the Department of Defense.

In summary, we continue to support strongly the building of the two authorized ships for national defense purposes because of their speed, their role in offsetting obsolescence of the U.S. passenger fleet and their immediate availability. The nondefense features of the program, such as commercial feasibility and methods of financing, are not within our sphere.

If we can be of further assistance, please advise us.

Sincerely yours,

NEIL MCELROY.

TAB C

Priority groups of ships in national defense reserve fleets prepared by the MarAd-Navy Planning Group

PRIORITY I. TROOPER-PASSENGER

Category	*Number of ships*
P2 passenger	6
C4 passenger	49
Overage passenger	6
C2 trooper	5
Total	66

PRIORITY II

Fleet oilers (AO)	13
T2 tankers (T2–SE–A2)	4
Commercial tankers (T2–SE–A1)	14
Commercial tankers (T2–SE–A2)	19
Commercial tankers (T2–SE–A3)	1
Total	51

PRIORITY III

Foreign-built Navy oiler (AOR)	1
Liberty minesweepers (EC2–S–22a)	10
Naval auxiliaries (S4–SE2–BE1) (AKA)	2
Naval auxiliaries (S4–SE2–BD1) (APA)	15
Naval auxiliaries (VC2–S–AP5) (APA)	1
Naval auxiliaries C–2 (AKA) (AF)	2
Naval auxiliaries C–1–B (AH) (ARG)	2
V4 tugs	46
Liberty tankers (Z–ET1–S–C3) (AW)	2
Liberty boxed aircraft transports (Z–EC2–S–C5)	4
Liberty naval auxiliaries (AR, AKN, AH, AK)	27
C1–M–AV1 (Cargo)	20
Total	132

Priority groups of ships in national defense reserve fleets prepared by the Mar Ad-Navy Planning Group—Continued

PRIORITY IV. CARGO SHIPS

Category	*Number of ships*
C3 cargo	2
Navy reefers (R1–M–AV3)	2
Navy reefer (foreign build) (Saturn)	1
C1–M–AV1 (R) (reefer)	3
C2–SU–R (reefer)	4
R1–M–AV3 (reefer)	4
C2–S–B1 (R) (reefer)	1
Victory cargo (VC2–S–AP2)	135
Victory cargo (VC2–S–AP3)	47
Victory cargo (VC2–S–AP4)	1
Converted Liberty (EC2–S–8a) (Benjamin Chew)	1
Commercial tankers (overage)	2
Victory troopers (VC2–S–AP2)	23
Total	226

PRIORITY V. MISCELLANEOUS TYPES (OTHER THAN DRY CARGO LIBERTYS)

C1–M–AV1 cargo	23
N3 Cargo (N3–S–A2)	4
Overage Navy Survey (AGS) (Bowditch)	1
T1 tanker (T1–M–BT1)	1
T1 tanker (AOG) (T1–M–A2)	6
C3—P. & C. (APA) (attack transports)	8
Victory Navy (APA) (VC2–S–AP5)	87
C1–B–cargo	22
C1–A cargo	7
C1–M–AV1 (dry cargo)	2
Liberty tank transport (ZEC2–S–C2)	8
Liberty cable ship	1
Military tankers (T1–M–A1) (AOG)	2
Military tankers (T1–M–A2) (AOG)	1
Military tankers (Navy design)	4
Total	177

PRIORITY VI. DRY CARGO LIBERTYS

Liberty dry cargo (EC2–S–C1)	69
Liberty dry cargo (EC2–S–C1)	83
Liberty dry cargo [1] (EC2–S–C1)	118
Total	270
Grand total	922

[1] Liberty dry cargo to be deleted as 87 VC2–S–AP5, 8 C3 APA, and 23 Victory troopers are converted to dry cargo ships.

FOOTNOTES

(1) The Department of the Navy will designate a priority for any ship subsequently delivered by it to the National Defense Reserve Fleet. As additional ships of a priority nature, such as C3's, C2's, etc., are subsequently delivered to the Reserve Fleet they will displace Libertys that will then be dropped from the priority list.

(2) If significant changes in the composition of the priority groups are affected from time to time a revised list will be issued by the Maritime Administration and the Department of the Navy.

(3) Liberty dry cargo ships on the list are named for planning purposes and are not be be considered as firm selections. Ships of this type of equal or better condition may be substituted by Maritime for those listed.

(4) All types of ships within a given priority group will be considered as having an equal priority for preservation.

(5) Annually, at the time Maritime receives its appropriation for Reserve Fleet expenses, it will inform Navy as to the adequacy of the amount to accomplish the preservation workload for the year.

Mr. KILDAY. We will meet tomorrow at 10 o'clock. The committee now stands adjourned.

(Whereupon, at 12:03 p.m., the subcommittee adjourned, to reconvene at the call of the Chair.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

THURSDAY, JULY 16, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10 a.m., Hon. Paul J. Kilday, chairman of the subcommittee, presiding.

Mr. KILDAY. The committee will be in order.

The subcommittee renews its hearing on the adequacy of transportation in the event of mobilization. We have this morning Owen Jones, Director of Transportation, Office of Civil and Defense Mobilization.

Mr. Jones, will you come around, please. I understand, Mr. Jones, that Governor Hoegh is not able to be with us this morning.

Mr. JONES. Yes, I want to extend his regrets. With your permission I would like to read his statement as though he were here.

Mr. KILDAY. Would you prefer to read his statement and then your own?

Mr. JONES. Yes.

Mr. KILDAY. Will you go right ahead?

STATEMENT OF LEO HOEGH, DIRECTOR, OFFICE OF CIVIL AND DEFENSE MOBILIZATION

Mr. JONES (for Mr. Hoegh). My agency has a central interest in the mobilization and defense potential of the transportation industry which your subcommittee has been established to study. In this field, as in others having a bearing on the civil defense and mobilization readiness of the Nation, my agency functions as the coordinating body for Federal activities and as the agency for guidance to State and local governments.

In the Office of Civil and Defense Mobilization we regard transportation as one of the critical national resources. Like communications and public power, transportation is an industrial service which must be responsive to the needs of all elements of our national defense. Unlike the resources of industrial produce—food, fuel, minerals and manufactured goods—the industrial services cannot be stockpiled and held for eventual use.

They are a dynamic part of our going economy. It is for this reason that we stress in transportation planning the importance of the industry's current health and continuing ability so respond instantaneously to any emergency which might arise.

I was pleased to note in preliminary exchanges of information with your staff, that you will emphasize in your deliberations the impact of

current economic conditions and the existing regulatory climate on our national defense posture. These are, of course, matters to which many are giving attention today, including a number of Government agencies and other committees of the Congress.

In view of the threat faced by this Nation, of possible mass nuclear attack against our centers of population and industry and our bases of military retaliation, the current responsiveness of all of our resources assumes a high importance. We know that should war come suddenly to this continent, it would be today's trained people and the existing plant and facilities which would have to meet it. We believe that for the most part they could. We believe that the natural competitive forces in our system of free enterprise, which have made our industries sensitive to the day-to-day demands of their customers, have in like manner forged national systems of commerce which would be keenly responsive to the more pressing demands of war. Transportation in particular has had to go where the needs of trade and travel called it, and to adjust to new and changing markets.

We know of no specialized training or measures which would better qualify this industry to serve the needs of the military and civil defense shipper under more serious circumstances.

At the same time, as we all know, there are forces other than competition at work in our economy, and a public service like transportation cannot operate in complete unbridled freedom and still be responsive to the total needs. There have to be the necessary rules and restraints. To the extent that these forces, these restraints, serve rather than deter the responsiveness of transportation to peacetime public needs and to military and civil demands in war, they are good and desirable. Where they do not, they are a hindrance and should be withdrawn. This, it seems to me, the identification and elimination of arbitrary restraints on the floor of goods over national transportation systems, is at the core of the problem before you. Our plans in civil defense and mobilization must include alternatives to the more desirable courses of action.

Let me briefly spell this out for you.

Transportation, like all our resources, will suffer seriously in a nuclear war; perhaps not as seriously as most resources, but this will be offset by stepped-up demands. Heightened activity in all fields will generate requirements to move men and materials quickly. As a result, it is unlikely that all essential needs for movement can be met.

Some surplus capacity can be tapped by the elimination of unnecessary services and the curbing of nonessential travel. Additional capacity may be gained by stepped-up schedules, heavier loads, faster turnarounds, use of alternate routes and modes, and so forth. If, however, these actions fail to provide us with the necessary capacity, we are prepared to exercise systems of allocations, permits, releases, embargoes and priorities in order to get the more pressing movements through. Military movements will, of course, have a general priority, as will movements essential to survival of stricken communities; and we have authority for resolving differences, should there be conflicting demands.

But long before such issues are likely to arise, we will have to take action to remove arbitrary restraints on the movement of essential men and goods, unless indeed this has been accomplished in advance of hostilities. Barriers of load limits and license which restrict inter-

state movements must be lifted or made uniform within the physical capacity of highways and bridges. Further studies should be made on bringing into being integrated transportation techniques, including the combining of systems and the pooled use of equipment and terminals for economic employment where it is now impossible under our laws, advancing the newer techniques for physical integration of load-carrying equipment and for through-shipper service from origin to destination over various modes, and bringing together into a central agency the various Government transport bodies and representatives from industry management who would become the controllers of national transport in emergency.

We believe the President's emergency powers adequate to meet the emergency needs of the industry. However, studies now underway in the Congress and the executive branch may develop recommendations to increase the effectiveness and strength of the industry and make it better able to accomplish its wartime task at the outset of hostilities.

Mr. KILDAY. Thank you, Mr. Jones.

Mr. JONES. I neglected to mention I have with me Mr. Thomas Baldwin, who is in our General Counsel's Office, and Mr. Avery Kolb who is a member of my staff.

Mr. KILDAY. We will note that for the record.

I believe if you will read your own statement, then we will have any questions.

STATEMENT OF OWEN R. JONES, DEPUTY ASSISTANT DIRECTOR FOR TRANSPORTATION, OFFICE OF CIVIL AND DEFENSE MOBILIZATION

Mr. JONES. Mr. Chairman and members of the subcommittee, my name is Owen R. Jones. I am Deputy Assistant Director for Transportation in the Office of Civil and Defense Mobilization.

In my discussion of the adequacy of transportation systems to support the national defense effort in event of mobilization, I would like to take the theme set by Governor Hoegh, our Director, and elaborate within each of the areas which you have pointed up for development in the course of this inquiry.

Governor Hoegh's statement expressed OCDM's coordinating function with regard to mobilization activities of Federal agencies and the States, and made the point of our interest in the present economic status of the transportation industry for its implications on national defense. In this connection, and so that there be no misunderstanding as to our relationship with Federal agencies having primary interests in current transportation matters, I think I ought to make clear at the outset the functional responsibilities of these agencies as we see them.

First of all, there is the executive group of agencies. The Department of Commerce is the key agency for Executive advice and action on transportation matters, and has, under the supervision of the Under Secretary for Transportation, the Maritime Administration, Bureau of Public Roads, Defense Air Transport Administration, and St. Lawrence Seaway Development Corporation. Other executive agencies having transportation functions include the Federal Aviation Agency, the U.S. Coast Guard, and the Corps of Engineers of the Army. Without implying a limit to the functions of these agencies

in any way, we might say that they are largely administrative and promotional with regard to the commercial transportation facilities of the Nation. We associate their wartime roles most directly with the restoration and development of the Nation's physical transportation plant.

The other important group of Federal bodies having transportation roles are the independent regulatory commissions: The Interstate Commerce Commission (for rail, motor, inland water carriers and pipelines); the Federal Maritime Board (for ocean shipping); and the Civil Aeronautics Board (for air carriers). These commissions are the rulemakers of their respective fields of transportation and the adjudicators of carriers and carrier-shipper disputes. We associate their wartime roles with functions of carrier controls and the full utilization of transportation in the hands of carriers.

In addition to these, we think of other agencies of Government as a group having transportation interests by reason of their dependence upon transportation service to get their nontransportation jobs accomplished. Important among these are the Department of Defense, Department of Agriculture, Department of the Interior, Atomic Energy Commission, Post Office Department, and others. Some of these, such as Defense, Post Office, and the General Services Administration, are owners and operators of Government transportation and therefore controllers in their own right. Insofar as their wartime interests in commercial transportation are concerned, we regard these agencies as claimants for the commercial service.

Now, if I may, I would like to turn to your suggested discussion points.

A. Your first discussion point inquires into the present status of domestic transportation systems and facilities. Your question: Are they sound physically and economically?

A quick résumé of what comprises the transportation industry today will help us in answering this.

This Nation has a substantial proportion of the world's transportation resources: more than the rest of the world combined, according to most authorities. Included in this are some 60 million automobiles, 12½ million trucks and buses, 30,000 locomotives, a million and three-quarters rail cars, some 12,000 commercial watercraft, and 65,000 aircraft. A detailed listing of terminals, roads, and other facilities would be similarly impressive. Yet these data would tell us very little about the strength and capability of the Nation's transportation industry.

First of all, the proportion of the above which serves the public as a whole, and which supports the main streams of commerce, is relatively small, amounting to the rail segment, a mere 150,000 trucks, 25,000 intercity buses, only 2,000 powered craft on inland waters, and something under 2,000 commercial aircraft. These common service for-hire public carriers represent the backbone of the transportation industry and the powerful composite force upon which greatest dependence would fall in wartime.

But far more pertinent than mere transport strengths is the fact that the American economy generated some 1,240 billion ton-miles of freight last year and the transport industry had the ready capability among its various components for accomplishing it. If this had been 1,340 billion ton-miles as it was the year before, or 1,500 billion as it

may be next year, the transport industry would have no difficulty whatsoever meeting it, for the primary characteristic of transportation is its versatility in adapting to ever-changing needs.

Nevertheless, in this industry of change, the main currents run deep and defy many popular concepts. For example, although we are far into the air age, we still live very much in the age of the wheel. Last year the so-called "declining" rails hauled a whopping 45 percent of total domestic ton-miles of freight, to far outdistance the other modes. And the automobile, at a ratio of 9 to 1 of all passenger-miles, completely overwhelmed other modes as the preferred means of travel in the United States. Such comparisons are, however, misleading. They obscure the fact that ton-miles and passenger-miles are not the sole criteria for measuring transport accomplishment, and that each component has its vital role to play in the overall picture.

Transportation responds to the economic factors of our society. If people find the speed and comfort they desire in planes, they will naturally turn to air transportation. If they find the door-to-door freight services they require in the trucks, they will naturally turn to motor transportation. If the services they need are not to be found in public common carriage, they will naturally turn to their own private means. These trends may adversely affect one or another existing carrier segment, but they are not to be condemned for this reason. What the free American economy demands, it will get.

We are of the opinion that the transportation industry, as it has evolved in response to natural forces of our economy, is just as sound and dependable as the American economy as a whole. We are also of the opinion that a transportation industry, so evolved and perpetuated, is by far the best which we may realize for responding to and supporting national demands in wartime.

B. Your second point of discussion has to do with present Government regulations, and you ask the question whether such regulations assist or retard the economic growth of any mode of transportation.

We in OCDM are not experts in transportation regulation; and an answer to this question would more properly fall on the regulatory agencies of Government, and the affected carriers would no doubt reply to the extent they are affected by regulation.

C. Your next point has to do with transportation's capability for expansion in event of mobilization.

It has been variously estimated that transportation has an ability to expand somewhere between 10 and 60 percent. Obviously, when you consider the amount of idle and partially loaded equipment moving over systems today, this is a wide variable. We know, for example, that in order to have successful operations, common carriers must make full use of time and load space, whereas the private operators can afford idle equipment in order to have the convenience of constant availability.

For purposes of mobilization, we have to regard private transportation as a great reservoir on which to draw in supplementing public carrier transport committed to defense needs. In the early phases of an attack situation, this reservoir of private transport may prove to be a godsend, and our plans contemplate the use of private automobiles, ocal trucks and buses, small watercraft and aircraft to assist in local civil defense and survival activities. However, this private segment of transport is the heaviest user of manpower and fuel in

relation to load carried and work accomplished. Therefore, as fast as mass transportation means can be expanded or reestablished to undertake the extra loads, private transportation will be converted, curtailed, or discontinued as a means of conserving or making better use of manpower and fuel.

One of the difficulties we face in analyzing the capability of transportation to expand in wartime is a lack of accurate and definitive data on the current strengths, composition, locations, and uses of private transportation.

D. Your next discussion point involves a number of questions relating to our mobilization policies and methods for handling wartime transportation requirements. We would like to cover these by discussing in general our national transportation plan and transportation mobilization programs.

The "National Plan for Civil Defense and Defense Mobilization," published in October of last year, is a first attempt to bring into a single document the basic concepts upon which present nonmilitary defense of the Nation is based. Annex 34 to this document, "The National Transportation Plan," now being coordinated throughout Government and with industry, will bring together the many facets of our national transportation preparedness effort.

This document establishes the mobilization objective of transportation as one of service to all elements of national defense, including the military effort, essential civil and industrial survival activities, and necessary foreign programs.

Although not specifically enumerated in the document, the plan also makes clear the policy concepts by which the transportation effort will be governed in wartime. The following are six basic principles of sound operations which have become almost traditional to our service and which are widely understood and accepted by industry and Government agencies.

1. The national systems of transportation must be maintained in service to the Nation as a whole. If, in an extreme emergency, lines are segmented by damage or fallout, every effort will be made to reestablish connections and to regroup intercity and interstate sections as quickly as possible.

2. It is planned the transportation will remain in the hands of private owners and operators insofar as may be possible under the emergency circumstances.

3. The essential shippers and transport users will continue to arrange movements by dealing directly with carriers. Plans do not contemplate a third-party Government dispatch function between users and operators except in local areas of disaster.

4. Wherever it may become necessary for local authorities to seize part of an interstate system of transportation to assist in relieving a local phase of disaster, this control will be relinquished as soon as broader systemwide, State, regional, or national controls can be established.

5. Federal controls over transportation will be exercised on a gradual and selective basis and only to the degree necessitated by conditions at the time.

6. Plans will not be fixed and rigid, but will take into consideration various alternative courses of action which may have to be pursued.

For example, specific priorities will not be stated in advance since actual circumstances may dictate the need for different priorities.

You will note that these principles somewhat overlap and are all directed toward assuring that industries be given every stimulus to carry on without undue Government interference, and that such Government action as may be necessary is done in the common interest of the community and the Nation.

The national transportation plan is supported by specific plans and action measures for the various modes of transportation, many of which are already in existence and are, I am sure, familiar to you. Briefly, some of the more important of these include—

The civil reserve air fleet by which agreements have been signed with commercial carriers to release specific long-range four-engine passenger and cargo planes to augment the military airlift.

The war air service pattern whereby civil air routes, schedules, and services will be readjusted to conform to postattack requirements.

The national emergency defense airlift program whereby executive-type aircraft exceeding 12,500 pounds have been organized to respond to civil emergency tasks.

The air priorities system for control of air transport space in emergencies

The NATO Shipping Pool to consist of commercial ships of the nations of the NATO Pact, except ships withheld by countries for specific military purposes.

General agency agreements for operation of wartime shipping to the account of U.S. Government.

Ships warrants procedure for wartime use of docks and repair facilities and for procurement of fuel.

Port utilization controls for the emergency commitment and use of facilities of the major U.S. ports, including the control of traffic in ports.

Standby mobilization orders giving general preference and priority for emergency movements by rail, motor, and inland water carriers

Standby mobilization orders embargoing freight shipments into areas of attack except movements under permit.

Standby mobilization orders permitting carriers to divert or reroute shipments and to extend operations to facilities of other lines in meeting emergency requirements.

Standby mobilization orders to allow carriers to dispose of undeliverable shipments.

Plans for the regulation of traffic over U.S. highways and for the rerouting of traffic around major target centers.

Plans for the use of alternate port facilities for offshore loading sites, and so forth.

Transportation annexes to State and city survival plans. All except two States have such plans.

Plans of specific transport industries—armored car plan, Great Lakes shipping plans, protection of highway facilities, defense plans of U.S. railroads, and many others.

Rather than discuss all the elements of our current work programs in OCDM, I will concentrate here on those in which you seem most

interested. You have asked about the determination of transportation needs, how reliance will be placed on the industry, and how the priorities system will work.

I have already made the point that we in Government transportation have no intention of trying to step into industry management's shoes nor to act as go-between for shippers in dealing with carriers. This suggests our very practical approach based on past experience in these matters, but brought up to date with current concepts.

In order to have a basis for quick determination of transportation needs in emergency, we have conducted two active programs for analyzing national systems and shipper demands. Under our national damage assessment program we have a fairly comprehensive inventory of transportation which we are able to machine-process on the basis of any attack pattern on the United States. This enables us to obtain a quick summary of transport capabilities.

Under another program of traffic movement forecasts we require the various departments of government to furnish projected requirements for transportation service in event of emergency. These requirements are compared with transportation capabilities to allow us to determine if we can do the job with the transport we have.

General Morris, of MTMA, will give you a comprehensive view of the workings of this program within Defense. Missing elements in the data have prevented a comprehensive analysis in the past. We expect the first complete evaluation to be made in Operation Alert this year.

All essential users of transportation have their own internal systems of traffic management, transportation requests, agency priorities, contract and other relations with carriers. These are exercised without interference from the Government control agency up to the point (1) where essential needs are not being met, or (2) there is conflict with another essential user.

In the first of these cases, the transport control agency will take necessary action to see that the user gets the service. This may be a matter of redirecting cars, recommending an available alternate mode or routing, or even the creation of a new service.

In the second case, where there is conflict with another user, we will try first to resolve the matter between representatives of shippers and carriers. We contemplate that in the majority of the cases this can be taken care of by reschedule or redirection of movement. Where such efforts fail, or where the criticality of service requires full-time control, priority systems will take effect.

The transportation control agency does not establish priorities for movement. Priorities are established at a level and by the proper authorities having power over total logistics effort of the war. Within priority guidelines established, the transportation control agency will exercise priorities. This is accomplished by agents designated to act for the Government on priorities within their fields. For example, the responsible spokesman for a carrier or carrier association may be designated to act as agent for exercising priorities. All his decisions in the matter are as established and given him. The normal method for carrying this out is for him, on the appropriate authority, to issue permits or releases covering the particular movement or type of movement involved.

Larger matters of priority, as between precedence to be given military and civil movements, may have to be referred to responsible Government authorities outside the transportation field. Where these involve decisions relating to the conduct of the war effort, they cease to be matters of transportation priority alone.

E. You inquire next as to what is presently being done by the interested responsible parties, potential users and carriers, to assure that transportation will be able to perform as planned.

I could not, of course, give you a detailed picture of all the things being done by Government and by industry which would directly or indirectly benefit transportation's ability to perform in wartime. Many major projects with which you are familiar—the Federal highway fund, the St. Lawrence Seaway project, river and harbor projects, air navigational controls, and so forth—while stimulating current commercial progress, have a tremendous influence on transportation's strategic value. In like manner, some of the major developments initiated within the industry have far-reaching implications for defense: Piggy-back and flexi-van rail-highway combinations; roll-on roll-off shipping; containerization programs; automated rails and centralized traffic control, and so forth. In one way or another, we in OCDM and in the other transport agencies become involved or exert our influence on these various developments and trends.

We are also associated with or have interests in developments in defense for prefabrication of piers, over-the-beach craft and lighterage, overland off-road vehicles, and atomic-powered transport, and so forth. In OCDM we conduct a limited research into transport emergency measures by technical studies, effects of nuclear weapons on vehicles and transport equipment, hardening of transportation facilities against radioactive fallout, and so forth. However, with regard to activities directly affecting business, since the termination of the accelerated tax amortization program a few years back, we have not sought Government funds to be applied to the stimulation of any segment of the transportation economy.

We consider of far more importance than any of these things, our programs which relate to the use, during mobilization, of the skilled men in Government, in the trade associations, and in industry itself, who would constitute the real indispensable element of the transportation complex in time of war. Our programs for the selection and training of executive reserves, our relationships with industry advisory groups, our emergency transport organization for bringing together existing talents in government with comparable management skills from outside of Government, are by far our most significant contributions to transportation readiness.

I am prepared to discuss these things further with you, if you desire. You have inquired specifically, however, as to the contributions of users and carriers.

With regard to the potential users of transportation in wartime: Every segment of the national economy likely to have functions during mobilization is represented by a department or agency of the Government. For example: Department of Defense for military; Department of Agriculture for food; Department of the Interior for fuels; Department of Commerce (BDSA) for production; Department of Health, Education, and Welfare for health and medicine, and so forth. Each of these departments has traffic managers or trans-

portation staff people who plan the movement of the particular commodities with which they are most directly concerned. Such traffic and transportation staffs would be the real working offices for arranging with carriers for getting things moved in wartime. We have worked particularly closely with Agriculture, Atomic Energy Commission, GSA, and Defense, in establishing procedures for handling emergency shipments. The Military Traffic Management Agency is a leader in this field, and has been most cooperative in working with us on emergency requirements.

Next, with regard to carriers: We keep in close touch with what is going on in industry through our consultants, reserves, and advisers from the transportation professions. The carrier associations located in Washington have proved to be a most valuable means for establishing contact with major segments of industry. These associations have shown themselves to be interested in our programs and have on numerous occasions contributed their own time and effort in getting our emergency guidelines into the hands of the individual carrier managements.

I need not point out here all the things which carriers are doing to make themselves better prepared to act in time of emergency. Suffice to say, that in addition to maintaining their own high state of operational capability, many have undertaken programs of employee education in civil defense; have maintained active programs for protection of their plant and equipment against loss from fire, blast, sabotage, and other hazards of war; and have participated in our tests at local and State levels and sent their management personnel to our training seminars and schools.

F. You inquire as to structural changes which we might recommend be made in transportation equipment. Although we are studying the possibility of conversion kits to change one type of vehicle to another and to make them adaptable to special uses, we have developed nothing specific in this field and currently have no recommendations beyond those things already being undertaken by the industry.

G. Your next discussion topic inquires into the roles of the individual modes of transportation and asks the question as to whether any one particular mode will play a paramount role in emergency.

Even granting that individual modes will be called upon to perform routine emergency tasks best suited to them, we feel that there may be particular phases or periods of emergency when it is probable that each of the modes might play the paramount role. For example:

1. A major role for water transportation. We know that in a nuclear attack with heavy damage to land terminals and other facilities, there will be a sudden turning to existing natural waterways as a means of escape from devastated cities, as a means of accessibility to areas otherwise shut off, as relatively safe avenues of commerce between intercoastal and foreign points. Radiation damage from fallout dissipates more quickly at sea than anywhere on land, and large quantities of water make decontamination of equipment and facilities relatively simple. Also ships and other watercraft possess power-generating and other facilities which are highly mobile and useful in time of stress. This could mean that ships might be used as refuge for survivors, for hospital services, or for power source to essential facilities ashore, in addition to their primary role as a dependable means of movement in the postattack period.

2. A major role for motor transportation. Only motor vehicles possess the ability to lift and transport the entire population of this Nation at one time. This suggests an important early role in any extreme emergency—the rushing of aid to stricken cities, and the large-scale movement of peoples to safer areas as required. Motor trucks and buses also possess an ability to go many places not accessible to other modes of transport, and would be indispensable in many services such as fire fighting, restoration of public utilities, transportation of wounded, and the distribution everywhere of the necessary medicines, food, water, shelter, needed by person to survive. They would also be indispensable in the resupply of antiaircraft and missile sites, and for the tactical employment of military forces.

3. A major role for rail transportation. By the simple action of adding cars to trains, the rails possess an ability to expand loadability without large additions of manpower and fuel. This has major significance for any time of emergency when these two commodities will be at a premium. Just as they do in peacetime, rails will be looked to for the handling of the bulk of industrial goods and products necessary to supply the Nation, get it back on its feet, and build our productivity to the status required to prosecute the war effort.

4. A major role for air transportation. The overriding importance of the military roles of aircraft in any future war somewhat detracts from anything I might say about their special transportation roles. Suffice to say that from the small aircraft used to shuttle officials and rush relief to particularly difficult locations, to the major aircraft used in logistical support to our armed forces both here and abroad, air transportation will play a vital part in the Nation's defense.

In these areas of transportation, we feel that each plays a role which cannot be performed by another service. Each complements the other, and adds to a total transportation ability which would be crippled should any significant part be missing.

H. You inquire as to what evaluation is given to such considerations as transportation's susceptibility to damage and destruction, ease of restoration and relative cost in time, manpower, and materials.

With regard to vulnerability to damage, transportation facilities may be divided roughly into three types: (1) Terminals, quays, shops and other fixed structures, such as bridges, tunnels, and locks. These are the most vulnerable, having a susceptibility to damage from blast and fire which is comparable to major industrial plants, warehouses, buildings, and so forth. (2) Equipment, including rail locomotives, rolling stock, motor vehicles, vessels, and barges. Extensive tests in the Nevada desert have shown transportation equipment to have a surprisingly low vulnerability to blast and fire. (3) Roadways, rail roadbeds, river channels, and so forth. These are known to have practically no vulnerability to damage except in the immediate zone of blast center.

The more important facilities of transportation, contrary to popular belief, are not the terminals, stations, garages, and so forth, in built-up areas. Rather the trucks, buses, trains, and craft out on scheduled runs are the physical components of transport most valuable in time of emergency. They are indispensable, whereas the other facilities are not.

Transportation en route between terminals is perhaps the least vulnerable of all important industrial resources by reason of (1) its

mobility, (2) its remoteness from other targets, and (3) the fact that it presents what the military term "in line" targets. We need not discuss these in detail, except to note that they suggest where precedence will be placed in restoration and recovery efforts.

In order that we will be able to quickly restore and get transport lines back into service, we are recommending as part of new plans for operation stockpiles—as opposed to present strategic stockpile concepts—that items like prefabricated piers, rail sections, highway markers, bridge members, navigational devices, and special fuels, be located at readily accessible points for immediate use in event of emergency.

In closing, I feel that I have covered a great deal of ground rather hurriedly. However, I have brought charts with me which will help explain some items on which you may want further details. None of my material is classified.

I thank you.

Mr. KILDAY. Thank you, Mr. Jones.

Your statement is very helpful.

Mr. Sandweg, any questions?

Mr. SANDWEG. I note, Mr. Jones, in your statement here you mention that the Interstate Commerce Commission will, of course, have information and data concerning Government restraints and the like, and yet in Governor Hoegh's statement twice he uses the phrase "arbitrary restraints;" page 3, the first paragraph, line about 10 and then again on page 4 the first paragraph, line 2.

Could you explain to us what he means there by "arbitrary restraints"?

Mr. JONES. Where was the second place he used it?

Mr. SANDWEG. Page 4, the first paragraph, line 2, and by first paragraph, I mean the first indentation—"But long before such issues are likely to arise, we will have to take action to remove arbitrary restraints on the movement of essential men and goods"—granted there are restraints on movement and load factors and the like but he uses the word "arbitrary."

In order that we can clarify his statement here, since it is a matter of public record, I wonder if you could comment on the use of the words "arbitrary restraints."

Mr. JONES. In this respect, I believe he has reference to the economic restraints.

Mr. KOLB. I think restraints not resulting from natural forces in the economy.

Restraints that are not consistent with regard to various modes of transportation, be they government or otherwise.

Mr. SANDWEG. Does he indicate thereby that there are some government restraints that are not consistent in the various modes. Perhaps OCDM would like to go on record in suggesting certain removals of restraints, pinpointing them so that the committee will have at hand some knowledge on that point to work from?

Mr. JONES. I think this is a matter of principle that he is talking about here. For example, he goes on in his next sentence "Barriers of load limits and license which restrict interstate movements must be lifted." Those are the things that we are talking about there.

Mr. SANDWEG. Then would you say that perhaps the word "arbitrary" might be ill chosen? It is perhaps quibbling about a word.

Mr. JONES. It is perhaps a stronger word. I think, in an emergency, we probably would have to use strong measures.

Mr. SANDWEG. I realize the use of the word might be questionable. I thought, since it was a matter of public record, it should be at least, to some extent, explained since exception might be taken to it.

Mr. JONES. That is the real explanation, I think: Any economic barriers we had that would restrict the movement of transportation as between States when we have restored the segments, the transportation segments into one, we should be able to remove in order to operate freely throughout the whole country.

Mr. BECKER. Mr. Chairman—I do not want to interrupt Mr. Sandweg—I think we understood what is meant by the restraints. I think I know what Mr. Sandweg is getting at. Perhaps from the Director we ought to get a little better explanation of what he means by arbitrary. The word has a certain connotation there. I do not know if Mr. Sandweg is getting at that. It has a certain connotation and I do not know exactly what it means to these restraints, arbitrary restraints. There are regulations by the Interstate Commerce Commission on all transportation whether it be rail, buses, or planes, as to the size of loads, and the weights that can be carried and all that sort of thing, the length of trucks.

What the word "arbitrary" means and how he uses it there I think we might get a better explanation on it.

Mr. JONES. It may have been an ill-chosen word.

Mr. BECKER. If it is ill chosen——

Mr. JONES. Nevertheless, our effort here, what we are trying to express here is a principle that we should be able to operate freely without any unnecessary restraints within the country.

If we can do that now, develop a situation like that now, we will not have to be faced with it in an emergency and have to take any arbitrary action, let us say, to do it in haste.

Mr. KILDAY. Would "mandatory" possibly be a better word?

Mr. JONES. Possibly, yes, sir.

Mr. BECKER. I think the chairman has the right word. In the laws in New York State, we had this question come up of all these restraints. Mandatory restraints but never the word "arbitrary."

Mr. SANDWEG. I have another question, Mr. Chairman.

Mr. Jones, you speak of your executive reserve. I think the committee would be quite interested in that because they are the organization as I understand it, that will be called upon to direct movement of shipping, not necessarily to take it over and operate it, as you indicated in your statement. I wonder if you could explain to us just how that will operate and what is the current status of that executive reserve program? Is it planned or is it operational, and if not operational, when can it be expected to operate since it is a major part and will be relied upon to a great extent in any mobilization.

Mr. JONES. As you know, the executive reserve program has been provided by Congress in legislation. In the transportation area all of our transportation agencies who are delegating agencies in transportation—Maritime, Interstate Commerce Commission, Defense Air Transportation Administration—have executive reservists on their rolls. Combining them into one number, we have approximately 200 executive transportation reservists.

They have, as a rule, met once a year. We use them at our Operations Alert exercises each year, either in the regions or at the national-level exercise.

These people in transportation are executives of their companies, both carriers and users of transportation. We have had one transportation seminar recently at Battle Creek where we had our executive reservists to review with them our transportation programs, various other training methods.

We have tried to indoctrinate them into the job that we would expect them to fill in the event of an emergency. We have a much larger program contemplated because we have got to increase our executive reserve both in numbers, and in their effectiveness, and in proper selection of people.

Our present purpose is to strengthen our reserves in the OCDM region. We have recognized, first, that in any nuclear attack, our country is going to be pretty well segmented and we will have islands of survival, which means that our strength and our executive reservists should be in the regions rather than at the national level.

We are, let us say, pretty well situated as far as personnel and capability of that personnel at the national level.

However, our regions are not, do not have that same capability. That is our program for the future, to build up a strong operational capability with our agency people who will form a part of our regional organization, Government agency people, plus the augmentation of them by the executive reserves who will be trained in the job that they are to do.

Mr. SANDWEG. Are these men in a position to go into operation tomorrow if M-day were to come tomorrow?

Mr. JONES. No, sir.

Mr. SANDWEG. Can you give us any idea for the record when a satisfactory if not the best program that you contemplate could be in operation, or will be?

Mr. JONES. Well, I have, let us say, an adviser who will take over an important role in the event of an emergency. We work very closely together in the selection of the proper—what we feel are the proper people to fill the ranks of the executive reserve. I am including people who are prominent in all carrier lines, air, rail, water, motor carrier, inland waterways, and so forth, and the user companies, companies using transportation.

We have selected people throughout all the regions now. Those people do not even know who they are at the present time. But that program is just getting underway. It has been a little while getting off the ground. It is underway. That is, as far as I can tell you, what we have done.

Mr. SANDWEG. Do you believe, then, if M-day would be tomorrow, it would be necessary for the Government to take over modes of transportation?

Mr. JONES. No, sir. The transportation industry is a disciplined industry. They have to meet schedules every day of the week. Their forces are trained to do that.

For example, if there is a train wreck, they find ways of getting around that train wreck, either by use temporarily of other railroad lines or of their forces which are so trained that they can restore service in a minimum of time, depending on the extensiveness of a

wreck. They are a disciplined force. I have no fears of the railroads being able to carry on, or any other segment of our transportation system, of carrying on in the event of any emergency right now.

It is a matter of controls, of who is going to use those services. That is the thing that we have to be sure of.

Mr. SANDWEG. Those are the only two points.

Mr. VAN ZANDT. Mr. Jones, several questions on the statement of Mr. Hoegh: First, are you satisfied that the coordinated effort of Government today is adequate to put into effect such a program that is spelled out here both by Mr. Hoegh and your statement?

Mr. JONES. You mean, our whole transportation program?

Mr. VAN ZANDT. Whole transportation program.

Mr. JONES. As we are resolving it, yes.

I think we are on the right track. Since I have entered Government services, I can look back now and see some definite results in our organization of a transportation concept for handling and controlling transportation in any emergency.

Mr. VAN ZANDT. Are there any weaknesses, any weak links in this organization, this coordinated effort? We are speaking about the field of transportation.

Mr. JONES. Well, our weak links—I would not say we have weak links. I would say this, that we have a lot of work to do ahead of us to put ourselves in order, so that we will have an operational capability beforehand.

In other words, we can meet an emergency if we have this operational capability which we are striving for now, with programs and an executive reserve program, and a training program for our executive reservists, plus the already built-in operational capability of the agencies of Government who are in transportation.

Mr. VAN ZANDT. Then you are saying that there is still a development necessary in certain areas that represent the links of this overall effort?

Mr. JONES. Yes, sir; there is a great deal of development. I do not minimize it at all.

Mr. VAN ZANDT. Mr. Jones, in connection with an all-out nuclear war, how close, from the standpoint of time, are you to the modern techniques and the results thereof of an all-out nuclear war? What I am trying to develop here, do you work a year behind the planning of the Department of Defense or how current are you?

Mr. JONES. We are working hand-in-glove with the Department of Defense. Our relationship there, is, I think, as far as I am concerned in transportation, outstanding.

I have a very close relationship with the military traffic management agency. We are in fact preparing now for an exercise which we are working out with the Department of Defense that involves a land exercise in connection with NATO.

Mr. VAN ZANDT. In other words, then, your planning in the field of transportation is current with the capabilities of all-out nuclear war as they are developed from time to time?

Mr. JONES. I believe they are; yes, sir. As far as the concepts that we have.

Mr. VAN ZANDT. I was speaking of the concept of the nuclear war. Have the Armed Forces determined what their domestic transportation requirements would be in the event of an all-out nuclear war,

or even we will say, full-scale mobilization? Have they furnished you that information?

Mr. JONES. No, sir; I do not have that information.

Mr. VAN ZANDT. Have you asked for it?

Mr. JONES. Yes, sir. We have asked for it. We know that it is being developed. It should be forthcoming in the not too distant future.

Mr. VAN ZANDT. How can your agency of Government develop an all-out program to meet any transportation problem that the Nation would be faced with in the event of full-scale mobilization or an all-out nuclear war without the requirements of defense?

Mr. JONES. I think what we have done is this: Lacking that information in total, we are still studying our transportation capability.

And I mentioned here that we have examined our transportation capability based on various attack patterns. What would we have left? We know what we are going in with.

Based on these attack patterns we have come up with our various capability answers. We know, too, that transportation is going to be hard hit and we know, too, that industrial plants and other areas that produce the need for transportation, that is, products that have to be moved, we know that they are going to suffer just as greatly as transportation, if not more.

There will be segments of transportation that will be able to move immediately, postattack, let us say, in the areas that are not hit.

But it will be a job bringing the whole transportation system together.

Mr. VAN ZANDT. Mr. Jones, in connection with your use of the word "restraint" in Mr. Hoegh's statement on page 3, you say "Where they do not, they are a hindrance and should be withdrawn."

Are there any restraints that are a hindrance that should be withdrawn?

And who can withdraw them and who cannot?

Mr. JONES. I think that is a general statement there. As I mentioned, they are some things that we had in mind. Of course, there are accusations of unfair tax schedules against some carriers. There is always the question of one carrier saying another carrier is getting more favored treatment and so on.

Those things we are not concerned with except we bring that as a general statement that any unnecessary restraints should be removed.

Mr. VAN ZANDT. Have you compiled a list of these hindrances, as we will call them?

Are you endeavoring to eliminate them?

Mr. JONES. No; we have not done anything to that extent; no, sir.

Mr. VAN ZANDT. Of course, one of the purposes of these hearings, I understand, is to acquaint Congress with your problems. If there be one or a dozen hindrances and if they cannot be removed administratively, I think it is our job then as Congress to remove them legislatively. Since you mentioned them here, I think you should familiarize the committee with them.

On page 4 of Mr. Hoegh's statement he mentions the necessary capacity, that is, of the transportation facility of the country to meet the national emergency. Is your organization or agency satisfied that in the event of an emergency and taking into consideration the damage that would result from nuclear bombs, will we then have the capacity to meet the needs of the Nation?

Mr. JONES. Yes, sir. I mentioned that earlier. I think we do.

Mr. VAN ZANDT. You think we have——

Mr. JONES. Yes, sir. I think we can meet every transportation requirement. Every essential requirement that is placed on transportation in the postattack period.

Mr. VAN ZANDT. On that same page you talk about further studies should be made and bringing into being integrated transportation techniques. What progress have you made on those studies?

Mr. JONES. We have made no progress. We have mentioned this at various times in appearances before public bodies, associations, and so forth in the hope that someone will carry the message on them and get something done.

Mr. VAN ZANDT. Is it not a fact that you have made this statement that "further studies should be made," does that indicate——

Mr. JONES. I think the studies should be made in the proper place in Government.

Mr. VAN ZANDT. In other words, to eliminate some of those areas where you feel that we are not adequate at the moment to meet——

Mr. JONES. I think that with regard to an integrated transportation system, for example, we are approaching some of it in our containerization programs that the carriers are carrying on, where they are using motor carrier and rail as an integrated service from origin to destination.

Mr. VAN ZANDT. In connection with your statement, Mr. Jones, on page 3, you put the question—of course, we asked the question of you and you are answering it: The question is: Are they sound physically and economically?

I would say from what you have said already that in your opinion the transportation needs of the country in the event of full scale mobilization or an all-out nuclear war, that the transportation needs of the country are sound physically and economically, that is right?

Mr. JONES. I would say as a general statement, they are. In an immediate mobilization period, and you have a little different situation in an immediate mobilization period than you would have in a nuclear attack, your demand on transportation would be heavier right in the beginning. There would possibly be some breakdowns in it but not serious because they would be rapidly picked up with the controls that would be put on it, such as embargoing undeliverable—getting rid of frustrated freight, embargoing shipments to prevent congestion, and many other controls that are self-initiating in the event of any emergency.

Mr. VAN ZANDT. This 10 to 60 percent expansion capability that the transportation industry has, in other words, you think that is adequate to meet the problem?

Mr. JONES. Those are opinions that have been expressed by people. I have gone on to mention, for example, our private carriers. They want their equipment when they want it. Even if it means that equipment lays idle for 2 days and they want it on the third day, it is there to use. That is, of course, really surplus transportation. That is what I mean, that it can expand at a terrifically high rate.

Mr. VAN ZANDT. In connection with local authorities seizing part of an interstate system of transportation to assist in relieving a local phase of disaster, that means that the Office of Civil and Defense Mobilization representative in that area would function in behalf of the

Government and would take over the interstate transportation system, is that right?

Mr. JONES. No, sir.

We have reference there that, for example, in one State, the Governor through his Civil Defense Director, may take over all the transportation in that State, including the interstate part of it, such as railroads and interstate motor carriers.

It would be only for a short time in order to relieve their immediate situation.

Possibly they are cut off from the rest. As people begin to pick themselves up and national control is established, they would take over the full interstate operations.

Mr. VAN ZANDT. Suppose we had an attack—a nuclear attack upon the Pittsburgh area, and great devastation resulted from it. What would happen to the transportation from the standpoint of control? How would the Office of Civil and Defense Mobilization handle that problem?

Mr. JONES. Here, in general, is our concept of control in transportation. There would be, for example, in our Operation Alert this year we have an emergency transportation organization, and if the State is cut off from any other State, the State transportation organization would operate.

They have their own operation. They would use the transportation they would require. Let us say within 30 days there is enough transportation moving between States and the OCDM regional office would pick up the transportation interstate, not the local, but the interstate transportation and intercity transportation by motor carrier, air, rail, and so on. As they pick themselves up they establish controls naturally. Then the regional transportation offices would work and report, maybe under the direction of the National Transporation Administrator whoever he might be.

Mr. VAN ZANDT. But, in the Pittsburgh area the responsibility of actually operating what was left of the transportation system would be left in the hands of the management under the direction of the State director of civil defense.

Mr. JONES. Immediate postattack. That is who would control use of it.

Mr. VAN ZANDT. On page 12 you refer to General Morris of MTMA. You say that he will give us a comprehensive view of the workings of this problem in defense. The missing elements in the data have prevented a comprehensive analysis in the past. We expect the first complete evaluation made in Operation Alert this year. What are these missing elements?

Mr. JONES. The missing elements were that we have not had an exercise with requirements before. Our exercise last year established our transportation capabilities. The exercise this year all through the region and up into the national part of it is a test of our capabilities to meet the requirements that are going to be placed on it.

So this is a requirements exercise.

Mr. VAN ZANDT. When did you get these requirements?

When were they established?

Mr. JONES. These are exercise requirements. Actual requirements would be classified.

Mr. VAN ZANDT. Did you get them just recently.

Mr. JONES. We had them in time for our exercise, which was about a month ago, I would say.

Mr. VAN ZANDT. It is proper to assume these requirements have been in your hands from time to time but they are changed along with the development——

Mr. JONES. No, sir. We do not have the actual military requirements. What I am saying is that for exercise purposes, we have some requirements to use that the military has provided us. They are not real, let us say, because they could not be.

Mr. VAN ZANDT. The Department of Defense has not yet, did not, rather, place in your hands the requirements until recently?

Mr. JONES. The Department of Defense did not place into our—placed in our hands only exercise requirements for an Operation Alert. We have never had total requirements.

Mr. KOLB. From both civilian agencies and military at one time.

Mr. VAN ZANDT. The executive reserve—could you give us a table of organization—make it available for the record?

Mr. JONES. Of our executive reservists? Yes, sir.

Mr. VAN ZANDT. These kits that you speak of on page 17, to be applied to various types of vehicles. You say you are studying the possibility of conversion kits. We have been in this period of a nuclear war threat for many years. Are you still studying the kits?

Mr. JONES. Yes, sir. We are considering them.

We have not come up with any real solution.

Mr. VAN ZANDT. What is your thinking there?

Mr. JONES. One thought is to have a kit for a boxcar, for example, to provide a rather austere arrangement in a boxcar but still sanitary for people. That is one of them.

Mr. VAN ZANDT. Living accommodations?

Mr. JONES. Not living accommodations, just barely existing accommodations.

Travel accommodations.

Mr. VAN ZANDT. Probably medical facilities?

Mr. JONES. Yes.

Mr. VAN ZANDT. Transportation of injured, wounded, and so forth?

Mr. JONES. Yes, sir; and people who are capable of taking care of themselves.

Mr. VAN ZANDT. Mr. Jones, on page 19 you mention "A major role for rail transportation."

By the simple action of adding cars to trains the rails possess an ability to expand, and so forth. Are you convinced that the railroad industry of this country today has the necessary equipment to meet the needs of expansion in the event of all-out mobilization or to meet an emergency in the event of a nuclear war?

Mr. JONES. From an all-out mobilization standpoint, it would be questionable over a prolonged period that they would be able to meet all the demands. In a nuclear attack, yes; I think they would.

Mr. VAN ZANDT. You say it is questionable, sir, as to whether or not they could meet all-out mobilization needs. Would you go into that in a little detail?

Mr. JONES. What I mean by that is in the initial phase there would be a heavy demand on transportation. They could probably meet it with certain controls. But then in order to keep our economy going,

both our civilian economy and keeping the military supplied, then we would have to certainly increase our transportation capability.

Mr. VAN ZANDT. By your answer, do you mean then that your agency has made a study of the rolling stock such as boxcars, flatcars, and gondolas, passenger equipment, and so forth?

Mr. JONES. No, sir. I made that statement in regard to mobilization as a general comment. As far as nuclear attacks are concerned——.

Mr. VAN ZANDT. We are talking now about all-out mobilization.

Mr. JONES. I make that as a general comment. I have made no extensive study on that. Do you know of any?

Mr. KOLB. We have our capability studies.

Mr. JONES. That is nuclear attack.

Mr. VAN ZANDT. We are talking about mobilization, now, sir. Did you say that they had made a study?

Mr. KOLB. No recent study, sir, on the full implication, primarily because we have not had the full impact—we have not been able to secure from all sources the demands to be placed upon transportation. We have some general ideas with regard to this. It is something that we live with constantly, but specific study, definitive study, no, sir.

Mr. VAN ZANDT. You say here, Mr. Jones, "Just as they do in peacetime, rails will be looked to for the handling of the bulk of industrial goods and products necessary to supply the Nation, to get back on its feet."

We are talking about the nuclear attack and the devastating damage and so forth. Are you satisfied that there is sufficient equipment, that means rolling stock and so forth, in the hands of the rails of this country today to get the Nation back on its feet, taking into consideration that something is going to be destroyed after a nuclear attack?

Mr. JONES. What I would like to bring out here is that we are going to have a dearth of materials, manpower—manpower is going to be a problem to run our transportation systems and fuel is going to be a problem. To the extent that they are available, I would say, will determine what our transportation capability will be, because we will have the equipment, I am sure. All of our capability analysis that we have made based on various attack patterns has brought that out, that we will have sufficient equipment. We want to be sure to get sufficient manpower and fuel to operate the equipment. With the fuel that is available, the cheapest form of transportation, or the form of transportation which will give us the greatest benefit to restore our economy is the rails, because they use fewer people and get more miles for their fuel.

Mr. VAN ZANDT. On page 20 you make mention here of roadways and railroad beds, river channels, and so forth. And the facts that they are not as vulnerable to weapons as some other phases of the transportation industry. That reminded me in Korea I had some time on the bombline. We used to knock out a Korean railroad late in the afternoon and the next morning the North Koreans had that rebuilt. We kept on doing that morning and afternoon, morning and afternoon, so you are absolutely correct. Those things can be rebuilt.

On page 21 you talk here about the strategic stockpile concepts. Will you go into a little detail and explain to us a little further what you had in mind?

Mr. JONES. As far as I know there are no stockpiles of these kind of things. And I think that we are going to recommend that we make a study of what we should stockpile. Defense, as I mentioned, has some types of stockpiles. But I think we have to go into it further from the civilian standpoint.

Mr. VAN ZANDT. On these prefabricated piers, what do you have in mind, the barge type?

Mr. JONES. Yes, sir.

Mr. VAN ZANDT. Not the stationary type here?

Mr. JONES. No, barge type.

Mr. VAN ZANDT. And your rail sections, you have there switches and crossovers and so forth?

Mr. JONES. Yes, sir.

Mr. VAN ZANDT. That is all, Mr. Chairman.

Mr. KILDAY. Mr. Becker.

Mr. BECKER. My questions will be very brief. I think Mr. Van Zandt has covered a great deal of ground here.

There is one point I am interested in, and I think this committee is, and that is results. I think we all recognize that the matter of transportation in the event of mobilization or attack, nuclear or otherwise, is a great problem. The Office of Civil Defense has a tremendous overall job. But in going all through your testimony and statement so much is left in the very nebulous state. There are always studies that are going to be made or we haven't the requirements of the Defense Department. The only definite statement you made was the fact that you have studied the rail capabilities. You know the capability but you do not know the requirements?

Mr. JONES. That is correct.

Mr. BECKER. Will you be able to come back before this committee at a time—at a time to be prescribed, and be able to say to us that we have covered these studies up to a date, not what is a possibility sometime in the distant future, but let us know that on December 1 of this year, 1959, we know that we have a capability to take care of the requirements of the Defense Department as well as the necessary civilian transportation? I am not just talking about civilian goods alone, but civilian transportation of products that are necessary in our complete mobilization. But everything in this statement and the answer to many of the questions of Mr. Van Zandt is "Well, we are making a study" or "There is going to be a study." We have to have results I think you will agree.

Mr. JONES. Yes, sir.

Mr. BECKER. The Office of Civil and Defense Mobilization has been going on for a long time. I know something about it. I wrote the civil defense laws of New York State in 1950 and 1951. I knew the problems that confronted us then. It took a couple of years. We have to have results and we have to have results now. I think this must be in the foreseeable future—I say foreseeable, I am talking about 3 months, 4 months, or 5 months—to fix a date as to what transportation we need and whether or not we can effectively take care of it at that time, but not 1961 or 1962 or 1963. That will take care of itself later.

What can we do now? And when are these studies going to be completed so we do know? If there is not enough money to take care

of the job to complete these studies, if there is not enough money to take care of more effective meetings of the Executive Reserves, and the Executive Reserve is not only affecting transportation but you have other Executive units, and if they are meeting once a year, I do not see how much can be accomplished by that meeting once a year. I have met with them when they met in Washington and I know people who are serving on them. When are we going to know some answers? I ask you that question: When are these studies going to be completed?

Mr. JONES. I cannot answer that question because we are dependent upon so many agencies of the Government, including the Department of Defense, to get out results.

Mr. BECKER. Will you tell this committee, the chairman, which agency of government so that maybe somebody can produce this agency to provide the information so that the study can be completed and given to us?

Mr. JONES. You see, as far as our requirements are concerned, which is the load that we have to put on our——

Mr. BECKER. I understand that, Mr. Jones. You told us about not having the requirements of the Department of Defense.

Mr. JONES. We have the Department of Agriculture for food, Department of the Interior for fuel, we have HEW for medicine, drugs, and so on. We have Housing for lumber and that sort of thing. It is a tremendous job.

Mr. BECKER. I am sure of that. I do not underestimate the job. But in a year's time, or 6 months' time, surely they could give an estimate of the requirements at a given date. The requirements may, we know, increase 10 or 20 percent within a year's time after that. That can be estimated. But surely they ought to be able to give some estimate of requirements at a given date so that you can complete the answer to the questions that have been asked here.

Mr. JONES. I am sure what you have said will help me to get these, too.

Mr. BECKER. I think heat should be put on to get these estimates at a given time so we can get your judgment as to what may come if this condition continues over a period of several years.

That is all I have.

Mr. KILDAY. Any other questions of the witness?

Mr. SANDWEG. No.

Mr. KILDAY. This concludes our schedule for this morning. We will meet at 10 o'clock tomorrow morning.

The committee stands adjourned.

(Whereupon, at 11:30 a.m., the committee adjourned until 10 a.m., Friday, July 17, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C., Friday, July 17, 1959.

The subcommittee met at 10:05 a.m., Hon. Paul J. Kilday (chairman of the subcommittee) presiding.

Mr. KILDAY. The committee will be in order. We will resume this morning the hearings on the adequacy of transportation in the event of mobilization. I understand Mr. Kenneth Tuggle, Chairman of the ICC, is here this morning. Will you come around, please, sir, and take a seat at the table. If you desire to have any others with you, they may come and join you at the table.

Mr. TUGGLE. There are several Commissioners here with me this morning: Commissioner Goff, Commissioner Freas, Commissioner Hutchinson, Commissioner Webb, and Commissioner Winchell.

Mr. KILDAY. We will be glad to have your statement. You may proceed in your own way.

Mr. TUGGLE. I will follow the statement rather closely, Mr. Chairman.

STATEMENT OF KENNETH TUGGLE, CHAIRMAN, INTERSTATE COMMERCE COMMISSION

I believe that it would be helpful at the outset for me to describe very briefly the activities of the Interstate Commerce Commission. Our primary responsibilities are concerned with the interstate domestic surface transportation industry, including the railroads, the motor carriers of passengers and property, freight forwarders, and the water carriers operating coastwise, intercoastal, and upon inland waters of the United States; and petroleum pipelines.

The principal powers conferred on the Interstate Commerce Commission by the Congress for the protection of the public interest may be stated briefly and in general as follows: (1) Control of the number of carriers and the scope of their service through issuance of certificates of public convenience and necessity and permits; (2) control of discontinuances of operations; (3) requiring that rates, fares, and practices of common carriers be just and reasonable, and prohibiting unjust discrimination and undue preferences and prejudices; (4) control of mergers and acquisitions of carriers, and of the issuance of securities; and (5) supervision of matters of safety.

Our jurisdiction varies for type of carrier; for example, we have safety jurisdiction over railroads and motor carriers, but not over water carriers.

The great bulk of the duties of the Commission is quasi-legislative; that is, they consist of the application of a general rule laid down by

the Congress with the Commission applying it to specific cases. A substantial amount of the work is also administrative in nature, such as supervision of published tariffs and the procurement of the information necessary to regulation from accounting and statistical sources. Some activities are quasi-judicial in character, such as the award of reparation for damage caused by unlawful rates and charges. Others are quasi-executive in nature, as in connection with the enforcement of statutory provisions or the Commission's own orders.

HISTORY AND STATUS OF ICC'S CIVIL AND DEFENSE MOBILIZATION ACTIVITIES

We get into civil and defense mobilization activities through two avenues. In the first avenue, we are charged by Executive order with doing the necessary planning and completing the required arrangements to carry on the regular operations of the Commission, pursuant to the Interstate Commerce Act and related acts, in time of emergency. In the second avenue, under delegations from the President by Executive order, and from the Office of Defense Mobilization, we conducted civil and defense mobilization planning and developed preparedness measures for the use of the domestic surface transportation industries in anticipation of, during, and following civil and defense mobilization periods. We propose to be prepared to support or actively participate in the operations of emergency transportation agencies during periods of international tension or actual warfare conditions.

The Commission has been associated with transportation defense mobilization efforts since World War II. The Office of Defense Transportation, created by Executive order in December 1941, was directed by the late Commissioner Joseph B. Eastman, for 25 years a member of the ICC. At one point this Office had 4,917 employees, many of whom came from the Commission.

This Office was charged with cooordinating the transportation policies and activities of Federal agencies and private transportation groups in support of the war effort. The Office of Defense Transportation was liquidated in 1947, and in 1950, in support of the Korean war, under authority of the Defense Production Act, a Defense Transport Administration was established as a separate entity under a Commissioner of the Interstate Commerce Commission. The latter agency existed under specific or earmarked appropriations until June 1955, using common facilities of the Commission and making use of Commission personnel, at which time it was absorbed into the Commission and its remaining small personnel complement set up as the Transport Mobilization Staff of the Commission.

This staff of approximately 15 personnel and a few consultants was concerned primarily, under delegated authority from the President and ODM, with plans, programs, and procedures relating to the utilization of domestic surface transportation and storage in the event of war or national emergency requiring full mobilization.

Funds in support of this staff were earmarked in the Commission's appropriation through fiscal year 1958, but in fiscal year 1959 the congressional appropriation removed all funds for expenses necessary to carry out defense mobilization functions delegated pursuant to law, and the Transport Mobilization Staff was liquidated on August 31,

1958. We have interpreted the action of the Congress in eliminating those earmarked funds as barring any expenditure of funds for mobilization activities, but Executive orders and other orders delegating responsibilities remain in force and effect.

We may, therefore, be characterized as being in a state of immobilization in our mobilization activities. As compared to our last earmarked appropriation for mobilization activities of $225,000, OCDM allotted us $10,000 in the last fiscal year. With this money we maintained an uncomfortable holding position knowing that many important mobilization responsibilities remain delegated to us, but knowing also that we are barred from mobilization activities in domestic surface transportation in a world saddled with international tensions.

The $10,000 was barely enough to permit us to use some of our field personnel in field exercises, to take note of what is going on around us in these activities, to maintain our files, and to participate in a very limited number of meetings. The $10,000, of course, allows no mobilization planning whatever. We have been negotiating a new Executive order with OCDM which would replace the delegations in the many existing separate documents and would place essentially all current delegations in one paper. Late last fiscal year, OCDM asked for $12 million in a supplemental request for fiscal year 1960 for use in allotting funds to a number of delegate agencies, but the entire amount was stricken by the House of Representatives. We were anticipating that funds could be provided by OCDM to ICC out of this supplemental to carry out the activities proposed to be delegated in the new Executive order.

Since our last earmarked appropriation of $225,000 was insufficient to permit us to do all the things delegated, obviously if the new Executive order were signed by the President, we would continue to be completely unable to assume the new responsibilities in any respect. We consider the current situation to be serious. We should be carrying on many important activities to prepare for the participation of the domestic surface transportation industry in any war effort, yet we are barred by lack of funds. This brings us up to date as to our status.

Probably the most significant portion of the Interstate Commerce Act, and one particularly important in any consideration of the national defense effort, is the statement of the national transportation policy. A pertinent portion of that policy reads as follows:

> It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this act, * * *; all to the end of developing, coordinating, and preserving a national transportation system by water, highway, and rail, as well as other means, adequate to meet the needs of the commerce of the United States, of the postal service, and of the national defense.

In all matters coming before the Commission, it keeps uppermost in mind the ultimate objectives of the national transportation policy. Although the Commission's defense mobilization activities are delegated to it (as distinguished from functions under the Commission's jurisdiction pursuant to the Interstate Commerce Act and related acts), the Commission has consistently recognized the relationship of its peacetime regulatory activities to the maintenance and strengthening of the domestic surface transportation system adequate for the national defense.

We believe that securing and maintaining an economically and operationally healthy condition is the keystone upon which the domestic surface transportation industry should base its ability to perform adequately in a mobilization period.

I will proceed to review, by type of carrier, the adequacy of domestic surface transportation to support the national defense effort in the event of mobilization, in terms of physical and economic conditions, ability to expand if needed in the event of mobilization, what is being dones to insure that transportation will be able to perform the functions planned for in event of such need, and so forth.

THE RAILROADS

The railroad industry has not shared proportionately in the Nation's general economic growth and prosperity during the postwar years. During World War II, railroads shouldered the largest share of war-swollen traffic, transportation over 90 percent of all military freight traffic and 97 percent of organized military passenger movements.

The railroad share of the total of public and private intercity ton-miles has declined steadily year by year, dropping from 67 precent in 1945 to 46 percent in 1957. Throughout the period, earnings have been uneven and relatively low, owing, in large measure, to mounting losses from passenger train services.

The railroad position turned sharply critical with the commencement of the business recession in the fall of 1957. The record of congressional hearings convened to inquire into the health of the transportation industry, and the deteriorating position of the railroads in particular, describe in detail the many troublesome problems of the railroads contributing to their financial plight. The Commission's testimony in these hearings identified the various problems of the railroads which, in the Commission's opinion, were the major causes of the declining railroad fortunes.

The Commission offered suggestions respecting specific legislative proposals designed to alleviate the conditions and discussed certain areas where railroad self-help was indicated. As a result of these hearings, the Transportation Act of 1958 was enacted on August 12, 1958. It provides for Federal guarantee of loans to railroads, clarifies the Commission jurisdiction over intrastate rates, grants certain powers to the Commission over the discontinuance of passenger train operations or services, amends the rule of ratemaking, restricts expansion of the agricultural commodity exemption, and redefines private motor transportation. Congress also repeated the 3 percent excise tax on for-hire transportation of property.

Evidence of continued concern over the railroad situation and related transportation problems is seen in the Senate's provision for a comprehensive study of the national transportation policy. The President also has directed the Department of Commerce to undertake a study to identify emerging problems, redefine the appropriate Federal role in transportation, and to recommend any legislative or administrative actions needed to insure balanced development of the transportation system.

The economic recession bottomed in the second quarter of 1958, but the upturn through the third and fourth quarters was not sufficient to raise railroad traffic for the year to a level near that of preceding

years. As it is the practice of railroads to regulate expenditures for new equipment and maintenance in accordance with financial condition and the volume of traffic being handled currently, maintenance of equipment and road was deferred where possible in 1958 and replacement equipment curtailed. For example, shipments of steel products for use in production of railroad equipment and materials dropped from 4.2 million tons in 1957 to 1.5 million in 1958.

Improvement in the movement of freight traffic that began in the last half of 1958 continued into 1959, and there are encouraging evidences that the railroads are taking some belated steps to put their operating plant in better condition.

In nuclear war, it is unlikely that we are going to have the opportunity, as in past wars, to work for full mobilization before an attack occurs—we are probably going to have to make do with what we have left after the moment of attack. We will have to pick ourselves up by our own bootstraps during the survival period. Therefore, a most urgent objective in any planning for the national defense is the institution of immediate measures to bolster the long-term and continuous health of transportation.

In terms of providing an industry healthy enough to develop and preserve adequate car fleets, it should be noted that the Commission is required to give due consideration, among other things, to the need for revenues sufficient to enable the carriers, under honest, economical, and efficient management, to provide adequate and efficient transportation service.

In carrying out that and other provisions of the Interstate Commerce Act, the Commission has repeatedly authorized increases in passenger fares and in freight rates generally throughout the country. The cumulative increases in freight rates thus authorized on commodities, generally since World War II, aggregate on the average 112.1 percent.

We think that present laws governing the setting of such rates and charges of railroads over which this Commission has jurisdiction foster their sound economic growth. Of course, the other carriers over which this Commission has jurisdiction benefit from application of the same types of legislation.

Much has been done in the past 10 years by carriers to improve the efficiency of rail transportation. For example, acquisition or installation of more powerful locomotion (dieselization and electrification), heavier rail, grade reduction, improved terminals, line changes, more modern communication facilities, signaling systems, centralized traffic control, mechanized track maintenance, automatic and radar controlled classification yards, "piggyback" service, and freight cars for specialized services. But adverse economic conditions forced the railroads to curtail expenditures of all kinds; and this curtailment was reflected in the equipment statistics for the year ended December 31, 1958. During the 10-year period, 1949 to 1958, class I line haul railroads made gross capital expenditures for additions and betterments totaling $11,476 million; of this amount $3,493 million was for road and $7,983 million was for equipment.

The supply of serviceable freight cars of class I railroads decreased during 1958 by 79,000 cars to 1,577,708, reaching the lowest point since July 1941, when there were 1,631,778, as a result of decreased installation of new cars, increased retirements, and curtailment of

repair activity. There is to be considered now, however, some additional load carrying ability per car due to changes in size, construction and other features.

The railroads have considerable flexibility in accommodating expansion in traffic with a minimum increase in equipment. They do not require additions to equipment in direct proportion to an increase in traffic handled.

The Commission does not have authority to require the railroads to purchase freight car equipment; neither does it have authority to prescribe rules and regulations for the maintenance of such equipment. In this respect, however, legislation recommended by us and currently being considered by the Congress, designed to improve the car supply, would authorize the Commission to include as a factor in determining the amount of per diem charge, the earning power or value of the use of the vehicle lost to the owner when used or appropriated by others. The loan guarantee provisions of the Transportation Act of 1958 may encourage an increase in the freight car fleets.

One bright spot on the horizon is evidence that the major rail carriers are making extensive plans to augment their present car fleets, either by building, rebuilding, purchasing, or leasing freight cars. For example, one large eastern railroad has just concluded arrangements for the acquisition of 23,500 freight cars. The cost is $215 million. Financing has been through conditional sales arrangements or leasing—mostly the latter. The order will be completed within a year. It is the largest car program both with respect to quantity and cost that has ever been undertaken by any railroad within such a short period of time.

The mechanical division of the Association of American Railroads, which deals with design, building, maintenance and repair, interchange and inspection of locomotives, cars, and other railroad mechanical equipment, serves as a clearinghouse to keep the carriers informed of any structural changes being considered.

There has been considerable study directed toward standardization of equipment and elimination of the diversity in parts for freight car construction. Failure to adopt standard equipment specifications is depriving the carriers of savings that could be made by applying more fully the advantages of an assembly-line technique for the production of parts.

The railroads are self-reliant and used to repairing damage from floods, fire, and other disasters in a hurry; and they can do the same in war when tracks, structures, and trains are main targets for bombs and sabotage. Rail service in and out of Hiroshima was restored within 18 hours after the first atom bomb was dropped. In a nuclear attack we expect less damage to railroad equipment, property and trackage, than to industrial facilities, due to the greater dispersal and reduced vulnerability of the railways.

Furthermore, industrial producers, which are the largest shippers, would probably be inactivated to a larger extent than the railways. The railways' ability to transport might be governed more by shortages of manpower and fuel, during a survival period, than by shortages of equipment or facilities. Fallout would be a particularly limiting factor during the survival period.

In World War II, with one-fourth fewer employees, one-third fewer locomotives, one-fourth fewer freight cars, and one-third fewer pas-

senger cars than they had in World War I, the railroads of the United States, each month on the average, moved about twice as many troops, performed more than twice as many passenger-miles of service, moved more than five times as much Army freight and express, 20 times as much Navy freight for oversea destinations, and nearly double as many ton-miles of freight of all kinds as they moved in World War I—and they performed this task without the prolonged delays and the congestion of the First World War.

In the event of a national emergency, the country would find itself short of gasoline, oil, rubber tires, and necessary automotive parts. On the railroads could fall the demand for quick transportation of greatly increased quantities of material, as well as to carry both our military personnel and a great number of civilians diverted from airways and highways.

Although there has been an upturn in improving freight fleets and increasing the number of serviceable cars by augmented repair programs, based on improvements in traffic and increases in revenue, the on-again, off-again policy of providing good maintenance and maintaining adequate car fleets, is contrary to any commonsense approach to maintaining railroads in condition to carry the load in time of national defense emergency.

In view of the need for an adequate freight-car fleet in the event of mobilization, the Government should continue to emphasize vigorously full freight-car production and to stress the importance of preparing the present freight-car fleet for immediate emergency traffic needs. Experience during World War II and Korea disclosed difficulties in procuring steel and parts for freight-car construction. Stockpiling of critical components should be considered. I will discuss passenger-car needs later. Perhaps some form of accelerated depreciation privilege or tax advantage would encourage the building of an adequate fleet of cars.

There are, to our knowledge, no known immediate plans to have the carriers supplied with additional spare parts and equipment to meet any emergency. Over the years, studies have been made of this problem. These consist of plans to stockpile freight-car components and parts which would be in short supply. We are not aware of any plans submitted along these lines which have been implemented. This preparation would demand a stockpiling program not only for the repair and construction of freight cars but also for locomotive repair and construction.

Emergency increases in traffic could partially be accommodated by considerably increasing the freight load per unit of equipment. This could be accomplished by a combination of ICC emergency-power service orders and cooperative effort. For example, relocation of equipment in anticipation of need; upgrading of cars; prompt release of equipment by shippers, consignees, and railroad forces at both ports and inland points; clean car campaigns designed to eliminate unnecessary delays incident to switching cars to cleaning tracks; the maintenance of bad-order cars at the lowest practicable level, and so forth.

In the past few years there has been much public attention to the declining fortune of the railroads as passenger carriers. The passenger business of the railroads in 1940, the year before our entry into the war, amounted to 24.7 billion passenger-miles, 8.7 percent of the total

intercity traffic (284 billion passenger-miles). The railroads were able to expand their volumes to a peak of 95.7 billion passenger-miles in 1944, an alltime record. Then a decline began, and the figure reached 26.2 billion in 1957.

Although this was slightly higher than the total of 1940 before stated, it was only 3.65 percent of the 1957 total intercity passenger traffic by all modes of transportation. In the intervening years, that total traffic has increased 2½ times. Railroads have practically no share in that increase, which is absorbed almost wholly by the private automobile and the airplane. Railroad passenger traffic in 1958 suffered a further decline to 23.3 billion passenger-miles which was the lowest figure since 1939.

Clearly there is no development or expansion of railroad passenger traffic, but a contrary trend. In 1958 the railroads recorded the carriage of fewer passengers than in any year in a period dating from 1890 (380.3 million in 1958 and 492.4 million in 1890).

The physical soundness and adequacy of the carriers' passenger carrying fleet is very low. As travelers have shifted from the rails to highways and airways, many railroad passenger cars have been scrapped. Despite the fact the railroads have invested more than $1 billion in the past decade for new and improved passenger equipment, for each new passenger car installed, three have been retired. For example, in 1945 there were 27,062 passenger cars, and in 1958 there were 15,491. Presently being stored by the military in relatively small numbers, are pullman cars and kitchen cars.

Federal, State, and local governments have spent $140 billion for improved highways and streets in the period of 1921–59; furthermore, from 1925 to 1959 the Federal Government spent $2 billion for the assistance of airway facilities and services; and more than $1.1 billion for the construction of civil airports. As this Commission pointed out in its recent report of its investigation of the railroad passenger deficit, the railroads—

> have good reason to believe that a major underlying cause of their loss of passenger traffic has been the governmental promotion of air and highway transportation by financial outlay and other means.

The construction of highways and the subsidized waterways have been of particular value to those shippers who are able to use their own trucks and barges in lieu of common carriers by rail, motor, and water. Since it has been shown by experience that in the event of war or other national emergency the common carriers are the most reliable and efficient transportation agency, the growing use of private transportation must be regarded as presenting a serious national defense problem.

The foregoing observations pertain principally to the promotional policies of the Federal Government. It should be pointed out, however, that the Transportation Act of 1958, to a considerable extent, grew out of a conviction on the part of Congress that State regulatory policies were hampering the railroads. The Smathers subcommittee referred to the need for an overhauling of local tax structures as they affected the railroads.

The Transportation Act of 1958 also removed authorities formerly available to the State commissions in preventing adjustments in intrastate rates to conform to the interstate level, and also reduced the

State commission's ability to prevent the discontinuance of unprofitable railroad trains.

Disclosures of certain inequities have recently caused the State of New York to take steps to relieve the railroads of some of their tax burden and a start has been made toward similar and belated relief in New Jersey. These measures are particularly designed to insure the continuance of commutation service in the New York City area. Similar studies are in progress at Boston, Philadelphia, and Chicago. The need is urgent for further actions along these lines.

We suggest that consideration should be given to a more far-reaching plan to stockpile passenger cars, particularly those being retired prematurely because of curtailed passenger service. These cars could be held in reserve for use in case of an emergency.

MOTOR CARRIERS OF PROPERTY AND PASSENGERS

The 1957–58 business recession appears to have retarded the growth of motor carriers of property but did not deal a setback such as that experienced by the railroads. The first quarter of 1959 brought a resurgence of large dimensions. Complete data are not readily available to measure the growth in terms of equipment and structures during 1958 and the first quarter of 1959, but it is believed that motor carriers continued to expand their fleets and erect new terminal and other properties at roughly the same rate as in previous years.

Motor carriers of property appear to be in reasonably good condition and are as able now as at any time in their history to participate in the movement of traffic under emergency conditions.

In any future war emergency, and especially in one involving situations of enemy attack on this continent, street and highway transportation will play a vital role. This mode of transportation is versatile in its ability to do many jobs, large and small, in any area where transportation is required. At the same time, the nature of highway transport, its gross size, number of operating entities, and extension into every sphere of military and civil endeavor poses serious problems of coordination and control requiring the closest kind of Government-industry cooperation.

Far-reaching changes have taken place in the Nation's highway transportation systems since World War II. For example: (1) an increase in the riding public as reflected in a population growth from 130 million persons before the war to over 170 million persons today; (2) an increase in private automobiles from 29 million in 1941 to almost 57 million today, with an accompanying increase in automobile usage; (3) the large exodus of population from the cities to the suburbs, with corresponding greater dependence on the automobile for transportation; and (4) greater dispersal and expansion of industry which has brought about increased reliance on commercial and private trucking.

The great upsurge in passenger travel by private automobile has caused a general tapering off of travel by other modes of transportation, with the exception of air. The 57 million automobiles provide a tremendous transportation potential. But in this strength there is also one of our greatest national weaknesses. Automobiles require great amounts of fuel and other resources, and are not readily susceptible to the kind of movement and controls so necessary in wartime. As a result, the trend toward automotive travel and our

national dependence upon it have had a serious impact on segments of the transportation industry which would become increasingly serious under mobilization.

On the other hand, to substitute for damaged or destroyed transit or mass passenger transportation facilities and to evacuate large segments of population from untenable areas, great reliance would have to be placed on the automobile to handle this heavy load. A minimum of 40 million automobiles would be necessary to provide essential passenger transportation. This number could be kept in operation for a reasonable emergency period, even though production of new automobiles would probably be stopped. The normal new and used automobile stocks in dealers' hands, along with the present number in excess of 40 million, should be ample to take care of necessary replacements to meet requirements, but motor fuel and tires could be a serious limiting factor.

In 1944 the intercity bus industry, made up of some 28,000 buses, transported more than a billion passengers. However, since that time, the volume has decreased to the point where today some 600 million passengers are transported. The gradual decline in passengers transported has resulted in a similar decline in the vehicles operated. Today, it is estimated that there are approximately 27,000 buses in operation.

Nevertheless, improvements in service brought about by vehicles with larger seating capacity, better utilization of vehicles, and more adequate terminal and shop facilities have resulted in a fairly healthy industry, capable of meeting current needs but with only a narrow margin for handling an expanded volume of traffic.

In the area of rapid transit, there has been a steady decline in riding since 1946 when some 23 billion passengers were carried, to allow of approximately 10 billion passengers annually. There has been a general shift from surface cars to buses. The total surface car fleet has dropped from about 80,000 vehicles in 1941 to about 76,000 at the present time.

However, the number of buses in the fleet has grown from 39,000 to 55,000 during the same period. Because of the consistent decrease in passengers and the accompanying decrease in revenue, perhaps more seriously felt here than in any other segment of transportation, the transit companies have improved their maintenance programs and, in spite of much old equipment, have kept their fleets in excellent mechanical condition.

Schoolbus transportation seems to be reasonably satisfactory. The number of pupils transported has steadily increased since World War II and so have schoolbuses. The latest information indicates that there are approximately 150,000 schoolbuses in use today. This number appears adequate to meet current needs, and these buses could be converted to defense usage.

The taxicab industry played an important part in the picture of the transportation industry in World War II and continues strong. It is estimated that there are now approximately 85,000 registered cabs in this country. The best information available indicates that such equipment is well maintained and in good physical condition.

In the motor carrier property-carrying field, the overall transportation picture is currently satisfactory. There has been a steady growth in trucking since World War II; the fleet having more than

doubled since 1941. Ton-miles for goods transported have jumped from some 58 billion in 1944 to approximately 260 billion in 1957, or about 340 percent increase. To keep pace with this demand for transportation, there has been an increase in vehicles over the same period from less than 5 million then to slightly more than 11 million today.

The growth in the number of vehicles has not been proportionate to the increase in ton-miles of goods transported. This is primarily because heavier vehicles are transporting greater loads and there is a more intensive and efficient use of equipment, less transfer of loads by reasons of interchange practices, and improved terminal operations.

Although the growth in the trucking industry has kept pace with the balance of industry, there is little unused cargo space available. Greater availability of such transport would have to come from more intensive usage of what is available.

Terminal construction and expansion has kept pace with increased tonnage. Today, terminals with the latest mechanical freight handling equipment, adequately meet the needs of the industry.

All factors considered, the street and highway transportation industry is now generally in a healthy physical and financial condition.

Since 1935, for-hire transportation of property and passengers in interstate or foreign commerce has been subject to Federal regulations. Such transportation was subject to State regulations in varying degrees for many years before 1935. Under regulation, the intercity ton-miles of regulated for-hire carriers have increased over 200 percent from 1942 to 1957. The average revenue of class I motor carriers has increased about 250 percent in the period 1944–57, with an even greater increase in investments in carrier operating properties. The growth of such transportation during this period has been phenomenal. It appears, therefore, that generally public motor transportation does prosper and grow under regulation.

It is expected that each mode of transportation will be utilized to its fullest extent in the event of an emergency. In intercity service, highway transportation normally handles about 20 percent of the total ton-miles, whereas the rail lines handle approximately 45 percent. Although it is probable that the proportionate part of the transportation which would be handled by rails would be greater than by any other mode of transportation, it should be noted that a high percentage of the tonnage transported by rails requires truck transportation at some stage of the journey. Therefore, the motor mode of transportation would be critical in providing the total needed transportation.

In considering the possibility of a national emergency and an attack on the continental United States, we can only guess as to damage to highway transportation facilities. Because of dispersal of intercity highway transport equipment, it might be assumed that such destruction would not involve more than 25 percent of that fleet.

Obviously, if such damage were to occur to the transport fleet, it would similarly occur to the productive ability of industry. Therefore, the availability of goods for transportation would probably not exceed initially the capacity of the transportation fleet to move such goods. Of the transportation fleet of approximately 11 million commercial vehicles performing adequate transportation for the needs of the economy, over 50 percent of the commercial vehicles are 1-ton

capacity or less and normally would not be included in intercity transportation potential.

These small vehicles are utilized in the main by farmers, retail delivery services and service operations. Another 25 percent of the vehicles have a capacity of less than 2 tons and are normally used for short-haul transportation. The two vehicle fleets which are in congested areas would probably suffer a higher percentage of loss than would farm and intercity vehicles.

However, to the extent they remained available, these two groups would bear the brunt of relief and short-haul service needs, assuming more intense usage. Such equipment would be in service long hours to meet local transportation needs in areas where damage occurs. Similar equipment could be shifted from unaffected areas to meet unusual needs in damaged areas.

The balance, or approximately 25 percent, of the national fleet makes up the principal transporting units insofar as intercity traffic is concerned. It is believed that the loss of hauling capability in this segment of the fleet could be overcome, to some measure, by more intense utilization of the balance of the fleet and by placing in service the new and used vehicles which are left in the hands of truck dealers throughout the country.

Generally, highway transportation is geared to the needs of the national economy. Production of new equipment and operating and repair parts, materials and supplies is geared to the needs of the industry. Therefore, any increase in the capability of the transport industry would have to be accomplished by greatly increased intensity of usage of the current fleets.

Likewise, sufficient manpower necessary for any expansion of the size of the fleets would probably not be available. In view of the foregoing, plans for carrying an expanded transportation load in an emergency must be based on making the fullest use of available facilities and carrying only items essential to the national defense.

Since 11 million commercial motor vehicles in this country are owned by some 5 million owners, direct Federal control over such vehicles would be impractical. In that number are some 29,500 operators of fleets of 12 or more vehicles. In an emergency we would have to rely on the owners cooperating as a unit under governmental guidance and leadership, based on an adequate system of priorities, to assure that highway transportation will perform the function planned for it.

The intensive utilization plan was worked satisfactorily during World War II, at which time there was no fleet damage, when all production of new equipment was stopped. The production of new equipment, parts, and supplies should not, if at all possible, be discontinued as any reserve vehicles available at the time of the emergency would be utilized to replace damaged or destroyed equipment and new vehicles would be needed for necessary replacements and fleet expansion.

No structural changes in street and highway transportation equipment would be needed as the equipment presently being utilized is of a type and size which can perform any transportation capable of being performed over the highways.

Defense planning requires knowledge respecting those motor carriers which the Commission has authorized to serve particular places, areas, or regions, as well as the commodities which may be transported

and other special requirements (especially equipment). Though this information is not at present available, the Commission has underway a motor carrier director program which will supply data for this and other necessary uses.

WATER CARRIERS AND FREIGHT FORWARDERS

In general, the economic status of water carriers operating over about 29,000 miles of inland waterways is good, although during 1958 most of them handled less tonnage than in 1957 and suffered corresponding decreases in freight revenue. It is expected that both tonnage and freight revenue for 1959 will be substantially increased. Since the war, inland waterway carriers have progressively increased the number and quality of their floating equipment and terminal facilities. The trend has been to build and place into service larger towboats and barges.

However, steamship operators in the coastwise and intercoastal trades are in poorer condition. Break-bulk service has decreased and almost disappeared in the coastwise trades. In the intercoastal trade such service is rendered on a marginal basis.

The Federal Government has authorized the improvement of some 29,000 miles of inland waterways of which about 22,500 have actually been improved. The Mississippi River system and connecting waterways on the gulf coast constitute the most important segment from the standpoint of commercial utility. This interconnected system accounts for 7,801 miles, or two-thirds of the 12,250 miles having authorized depths of 9 feet and over, which is generally required for modern towing operations.

The shipment of a relatively few bulk commodities characterizes inland waterway transportation, and constitutes over 85 percent of total movements.

The greater part of inland waterway transportation is exempt from regulation either as private transportation or under specific bulk commodity exemptions. It is estimated that there are approximately 1,700 operators of towboats and barges in the United States, of which only 226 are regulated to some degree by the Interstate Commerce Commission.

The majority of total capacity, as represented by barge and motive power capacity, is operated by exempt carriers. It is estimated that for the Mississippi River system, including the Gulf Intracoastal Waterway, between 65 to 70 percent of capacity is exempt; along with coastal waterways, approximately 75 percent of capacity is exempt. A substantial part of regulated carriers' traffic is also exempt from regulation.

A relatively few large carriers account of the preponderant share of regulated movement of inland waterway traffic.

Economically, the situation with respect to carriers on the Great Lakes is substantially similar to that of carriers operating on inland waterways. They are physically strong and able with existing equipment to adequately accommodate the vast amounts of bulk commodities available for movement on the lakes, but break-bulk cargo has greatly decreased. The opening of the St. Lawrence Seaway will add to the total capacity of the transportation system, particularly the area directly served, and may provide an alternate facility during emergencies.

We believe that Government regulation assist economic growth of transportation on inland waterways. State or local regulations are not believed to be an important factor in connection with the operations of water carriers.

In general, it is believed that inland waterway carriers are in good financial condition, and are capable of expanding their facilities and service to meet an emergency need for water transportation, given the time to increase their fleets. During peacetime, about 80 inland shipyards build towing vessels, barges, and other waterway craft for the movement of property. This number was increased to 140 to meet the needs for vessels during the war period, 1941–46.

During World War II a most significant contribution of the water carriers involved the movement of millions of tons of petroleum products which helped to make up for the loss in petroleum shipments caused by the sinking of coastwise tankers and the transfer of vessels to naval service.

FREIGHT FORWARDERS

Freight forwarders generally use the facilities of other interstate carriers and, therefore, are not considered separately herein.

OIL PIPELINES

The Commission has rate regulatory jurisdiction over oil pipelines, but it does not have control over entry into the field.

The network of regulated pipelines transporting crude and refined oil reaches into 43 States and the District of Columbia. The total regulated network comprises 143,235 miles (32 percent more than in 1943); 85 percent of the mileage is in 12 States.

During the past 15 years, the number of oil pipeline companies reporting to the Commission has increased from 74 to 82. However, the investment in carrier property has more than tripled, from $9 5 million to $2,949 million. While this increase in investment reflects increased prices for equipment and materials to some extent, there is ample indication of expanded operations by the companies. From 1943 to 1958, the miles of gathering lines have increased from 42,471 to 49,787, or 17 percent, and the miles of trunklines operated has increased from 66,312 to 94,605, or 43 percent.

During the same period, the number of barrels of oil, crude and refined, receiving trunkline movement increased 90 percent and the number of barrel-miles for trunklines increased 139 percent. For the last several years, the volume of crude oil transported by pipeline has tended to stabilize, declining in 1958, while movement of refined oils has continued to gain.

Transportation of refined oils by pipeline has assumed more importance in recent years. In 1958, refined oils accounted for 24 percent of the total number of barrels and 23 percent of barrel-miles, as compared with 15 percent and 16 percent, respectively, in 1949.

The relationship of pipeline traffic to mileage operated indicates that existing lines have considerably more capacity than earlier facilities, probably the result of increased pipe diameters and the installation of additional or improved pumping equipment.

Oil pipeline companies appear to be in sound financial condition. Operating revenues in 1958 were $720.7 million or 160 percent greater than in 1943—down slightly, however, from 1956. Net income (after taxes) increased from $61.3 million in 1943 and $53.1 million in 1947 to $161.8 million in 1958.

It is estimated, based on information from the industry, that regulated pipeline mileage is approximately 75.6 percent of total interstate and intrastate mileage, regulated and nonregulated. On this basis, total pipeline mileage approximated 192,000 miles in 1957.

The 232.7 billion ton-miles of intercity traffic, public and private, transported by oil piplines in 1957, convert to 1,523,062,665,000 barrel-miles. On this basis, regulated barrel-miles are about 77 percent of total regulated and nonregulated barrel-miles.

During Federal regulation, pipelines have prospered and grown. They are not as vulnerable to damage due to dispersal, except at gathering stations. However, repairs are comparatively easily accomplished if material and manpower are available.

SUMMARY AND ANALYSIS

The capability for expansion of domestic surface transportation in the United States if needed in the event of mobilization obviously depends upon the character of the emergency which evokes mobilization. Under conditions of full mobilization without attack on the continental United States the potential for expansion would differ greatly from a situation where the emergency involved a full-scale nuclear attack upon the continental United States.

Under the first assumption, full mobilization without attack on the continental United States, the potential for expansion would probably have to be measured primarily by the reserve or excess capacity existing at the time of the emergency in the various elements which go to make up the domestic surface transport complex—railroads, motor carriers, inland water carriers, and petroleum pipelines. Past actual experience in this area supports the conclusion that in an all-out war the demands of a full mobilization of the Nation's resources would not permit of any build-up in the size of the domestic surface transport fleet or the construction of additional support facilities. Increased capability, under such circumstances, would, in our opinion, be attained primarily through the provident and more efficient utilization of existing resources by the use of conservation and stretch-out measures such as heavier loading, elimination of waste, reduction in less essential traffic, etc.

Reliable estimates within Government, made after consultation with industry, clearly indicate that the potential for substantial increase in load carrying ability exists in the domestic surface transport area, although not to the same degree in the several forms of transport.

The truck fleet of the Nation has been steadily increasing in numbers since the close of World War II. It possesses a high degree of capability for carrying a greater traffic load. On the other hand, the motor bus fleet has been reduced in size in recent years because of a lessened demand for bus transportation. Its capacity for carrying a heavier load consequently is limited. Numerically, the rail freight car fleet is less than it was in World War II, but with an increase in

the average carrying capacity of freight cars, automation of classification yards, improved automatic signal traffic controls, and dieselization of motive power, the railroads are equipped to handle a larger traffic load than they are presently being called upon to transport.

This, however, is not true with respect to rail passenger traffic, where the reduction in intercity passenger business has substantially reduced the number of rail passenger cars in the fleet and has resulted in a trend toward construction of a type of equipment designed to carry fewer passengers per car.

In the inland waterways transport field, freight carrying vessels of greater capacity have been steadily added to the fleet within the last 10 years, which afford the industry a substantial potential for expansion of its load carrying capability.

Under the second assumption—full-scale nuclear attack upon the continental United States—presumably all forms of domestic surface transport would, like other segments of the economy, suffer severe damage, particularly to fixed facilities located in or near target areas.

Under such circumstances, the problem for an indefinite period would appear to be the restoration of transportation service wherever feasible with facilities at hand and those which could be repaired and rehabilitated with resources available for such purposes.

Any expansion of capability, except in nonattacked areas, would be governed necessarily by the progress and degree of restoration and rehabilitation of what remained after attack in the affected areas.

To attain the optimum expansion of the capability of domestic surface carriers through such measures as those above suggested would, in the nature of things, require additional manpower and material or the replacement of these resources which are destroyed. Stepped-up utilization of rolling stock and associated facilities to provide additional schedules, faster service, and heavier loading could not be accomplished to any significant degree with current levels of manpower in the transport industry.

And, of course, such intensification of use would involve a higher degree of wear and tear on equipment and facilities and increase the factor of accidental damage probability, all of which would call for larger amounts of replacement parts, and maintenance, repair, and operating supplies.

Similarly, after large-scale direct attack, transportation would require a proportionate share of manpower and material replacements for rehabilitation of crews, plant equipment, and operating supplies. Thus, to a high degree the ability of the carriers to resort to their reserve excess or rehabilitated capacity would be governed by the policies of those Government agencies which would have the responsibility for manpower controls, controlled materials plans, and allocation of products to essential users.

In its past participation in mobilization planning, the Commission has consistently taken the position that, in the event of a national defense emergency, primary reliance should be placed on commercial transportation to move essential traffic and that, except under extreme circumstances where it is infeasible, users of transportation should continue to deal directly with domestic surface carriers in the usual manner.

Transportation, being a service and not a commodity, is not suited to procedures for the detailed allocation or rationing of commodities

which by virtue of their finite characteristics permit of impounding and release to consumers and manufacturers under a consumer rationing system, or controlled materials plan.

On the other hand, transportation, because it is a service, lends itself more readily to a system of priorities and embargoes. Under such a system transportation can, with a minimum of procedural controls, be channeled into essential national defense uses. While a priority and embargo system is an effective tool of transport control, it is to be recognized that it is not a function of transportation carriers under such a system to determine what shall move or in what order of priority.

That determination is one for that agency which in an emergency has been invested with the allocation and priority powers of the President.

For use in the event of a declared national civil defense emergency, the Commission has developed a system of priorities and embargoes for surface commercial carriers in continental United States. The system is embodied in a series of general transport mobilization orders applicable to railroads, motor carriers, and inland waterway carriers.

Under these mobilization orders, intercity passenger carriers for hire, for instance, would be required to give preference and priority over all other traffic to the transportation of uniformed personnel of the Armed Forces of the United States in official travel status (including military recruits in travel status) and to accredited civil defense workers.

In its participation in mobilization planning, the Commission has consistently taken the position that, in the event of a national defense emergency, primary reliance should be placed on commercial transportation to move essential traffic and that, except under extreme circumstances where it is infeasible, users of transportation should continue to deal directly with domestic surface carriers in the usual manner.

Transportation, being a service and not a commodity, is not suited to procedures for the detailed allocation or rationing of commodities which by virtue of their finite characteristics permit of impounding and release to consumers and manufacturers under a consumer rationing system or controlled materials plan.

On the other hand, transportation, because it is a service, lends itself more readily to a system of priorities and embargoes. Under such a system transportation can, within a minimum of procedural controls, be channeled into essential national defense uses. While a priority and embargo system is an effective tool of transport control, it is to be recognized that it is not a function of transportation carriers under such a system to determine what shall move or in what order of priority. That determination is one for that agency which in an emergency has been invested with the allocation and priority powers of the President.

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over all other traffic to the transportation of uniformed personnel of the Armed Forces of the United States in official travel status (including military recruits in travel status) and to accredited civil defense workers.

Where necessary to accord such preference and priority, the carrier is directed to limit or restrict the number of passengers transported. In the case of freight carriers for hire, the orders would impose general embargoes on all shipments to areas under attack or which have been subjected to enemy attack, except shipments moving under civil defense symbol or consigned to a State or local civil defense authority, or to an establishment of the Department of Defense or Atomic Energy Commission. A system of permits is provided for each form of domestic surface commercial transport, which is governed by a priority list applicable alike to all. Their permit system provides for the appointment of general permit agents and individual field permit agents in such numbers as the situation might require.

Other general transport mobilization orders developed by the Commission cover such subjects as rerouting and diversion of traffic, expansion of motor carrier operating authority, disposal by carriers of undeliverable shipments, control of liquid transport vehicles, control of freight shipments to or within port or storage areas, restrictions upon the transfer, change in use, or terms governing use of port facilities, and inventory and disposition of shipments of food and medical supplies requisitioned by the Government while in the possession of commercial carriers.

There are 12 general orders in the series and each contains the provision that it is to become automatically effective in the continental United States upon the proclamation of a national civil defense emergency by the President or Congress.

They were issued in December 1956, and amended subsequently under authority of the Defense Production Act of 1950, as amended, and delegations thereunder, through the Commissioner then in charge of mobilization planning. All of them, in digest form, were furnished to Government agencies interested in, and to carriers and operators who would be affected, by the orders. Dissemination of the information contained in the digest was also made to the shipping public. The digest has been very widely circulated through trade associations, trade publications, shipper publications and magazines concerned with national defense transport problems. There has been general acceptance of the mobilization orders by operators and users alike. The digest makes it clear that an actual emergency might require changes in the orders or might make individual orders unnecessary. It is our understanding that they are being used in various Government agencies as a basis for planning in those areas where domestic surface commercial carriers enter into agency mobilization plans.

As far as I am aware, the Commission has never been asked to consider, or to participate in the consideration of, the question of what structural changes, if any, would have to be made in any of the various types of equipment used in domestic surface transportation in order to function effectively in a national defense emergency.

However, there has been an increased effort on the part of industry, particularly the rail industry, to secure certain types of special equipment suitably modified so as to provide loading capacity in both directions. Recent innovations in equipment give promise of availability of suitable and increased load carrying capacity.

Consideration of the role of the modes of transportation in the event of mobilization for a national defense emergency requires consideration of many imponderables and is highly speculative. The character of the emergency, the nature and extent of damage inflicted upon the manufacturing and production resources which generate requirements for transportation, the kind and extent of damage suffered by transport personnel, the type and extent of damage to transport equipment and facilities, the availability of manpower and equipment replacements, the availability of maintenance, repair, and operating supplies—these are some of the factors which would enter into the picture. If there were to be visited upon this Nation such an attack as was recently hypothesized in testimony given before a subcommittee of the Joint Committee on Atomic Energy (June 22), it is conceivable that because of the flexibility and maneuverability of the motor vehicle, the motor carrier would be forced into the paramount role in and about affected areas for an indefinite period.

On the other hand, it is readily conceivable that in the unaffected areas the railroads would continue to carry the bulk of intercity traffic handled by domestic surface carriers.

Stockpiling of parts and equipment for use by domestic surface carriers has been explored on several occasions since World War II but without any discernible progress. Perhaps the most intensive study made of the subject concerned railroad freight cars and was made by a subgroup of the so-called Conway Committee of the Office of Defense Mobilization.

This group was chairmaned by an executive of one of the largest railroads in the country and its membership included qualified representatives of industry and the military and civilian components of the Government. The group seriously delved into the various facets of problems associated with the stockpiling of parts for freight cars, including, among others, initial financing of the acquisition of a stockpile of parts, establishment of a revolving fund for a revolving inventory, standardization of parts, warehousing of parts, and management of such an enterprise by private interests. The group failed to come up with a workable program that it could recommend for adoption by those primarily concerned, that is, the railroads and the freight-car builders.

As discussed earlier, the Department of Defense supports in its own interest a modest stockpiling program of retired rail sleeping cars and coaches obtained under arrangements with the Pullman Co. and certain railroads. These cars are stationed at various military installations in this country and are maintained at the expense of the military. No doubt, the representatives of the Department of Defense will present the salient facts concerning this program to the subcommittee.

A method of stockpiling rail passenger capacity has been considered on several occasions since World War II. It embraces a sort of "stockpiling-in-use" technique. The Department of Defense has frequently expressed concern over the reduction in rail passenger-carrying capacity which has taken place in recent years. In an effort to counteract the trend, proposals were made for incorporating in new passenger equipment as constructed certain so-called national defense features which, in the event of mobilization, would provide a factor of immediate convertibility that would result in increased

passenger-carrying capacity. The theory of these proposals was that the additional cost of incorporating such features would be borne by the Government as a legitimate charge against national defense. However, no satisfactory method of financing the construction of prototype models to test the feasibility of the plan was ever developed and, as far as I am advised, the subject is not currently under consideration. We have heard, however, of plans by the Defense Department to utilize conversion kits for using freight cars for passenger traffic.

The foregoing comments are neither calculated to paint an unduly rosy picture, nor to suggest that the domestic surface transportation industry is any less well prepared to support a national defense effort than any other part of the economy. As I stated at the beginning of my statement, the best preparation is that which will put the industry in the most healthy status financially, equipmentwise and leadershipwise. Collaterally, we must consider thoroughly and carefully the features of the varieties of emergencies this country might face—from limited, small-scale warfare at great distances from our soil, to the most terrible holocaust that could destroy many of our people and important elements of our economy and resources.

Then, based on these hypotheses, we should develop plans for coping with these many possibilities or combinations of them. Such plans should include provisions ranging from protection of facilities from sabotage, to reduction of vulnerability through dispersion and protective construction, to preservation and replacement of equipment, facilities and records, to establishing chains of command for succession, to building alternate headquarters, and so forth. I am confident that we have consistently approached regulation so as to establish a healthy industry; but in all candor we must state that we are making no plans for its mobilization because no money has been appropriated for this purpose.

We are not without experience from previous emergencies, and we have drawn heavily on representatives of industry and the Government in planning for emergencies. Much good mobilization work has been done cooperatively in this field by OCDM, the Interstate Commerce Commission, and other transportation agencies. Unfortunately, the efforts of the Commission in this area have been stymied in the last year due to the disallowance of funds, and thus we have lost continuity of effort. We are prepared, however, in cooperation with the industry and other Federal agencies such as OCDM, to pick up where we left off and pursue our mobilization activities with the vigor that the current state of the world's international affairs demands.

PEACETIME AND MOBILIZATION REGULATION

I believe it would serve a useful purpose for me to set forth now a number of views to which the Commission subscribes and which are concerned with securing or maintaining the improved health of the domestic surface transportation industry.

I shall first talk very briefly about the effects of two types of Federal regulatory controls over the domestic surface transportation industry and whether they are conducive to building up a sound transportation industry ready to be effective in national defense.

One contention vigorously pressed, on the public rostrum and in the press, is to the effect that the rails are unduly restrained and discriminated against ratewise. It is suggested in such reports of discrimination that rate regulation causes an unfavorable economic effect on the transportation industry. In this context, a clear picture of the ratemaking process is important.

Rates in the first instance are made by the carriers, themselves, subject to the overriding authority of the Commission to prevent the maintenance of any that are in any way unlawful. These carrier-made rates are filed in tariffs published in accordance with rules prescribed by the Commission. Any interested person, shipper, or carrier may protest a proposed new or changed rate, and request that it be investigated and that, pending final determination, its operation be suspended for a period not to exceed 7 months. Rates that are not challenged generally go into effect as a matter of course.

Exclusive of schedules involving general increases in rates, more than 50,000 rail tariffs were filed with the Commission in 1957. These rail tariffs contained hundreds of thousands and perhaps millions of rates. We estimate that 98.3 percent of these tariffs became effective without protest or restraint by the Commission. Of the remaining 1.7 percent which were protested, about 85 percent were nevertheless permitted to go into effect without suspension. In other words, in about one-fourth of 1 percent of the total the voluntary action of the carriers was restrained by the Commission's exercise of its investigation and suspension powers. In about one-half of the cases suspended pending investigation, the proposed rates were approved upon completion of the proceedings.

Therefore, instead of the claimed Government interference unnecessarily preventing what the carriers see as the proper exercise of their managerial responsibilities, merely one-eighth of 1 percent of their proposals are restrained. Among this one-eighth of 1 percent are found the proceedings which are repeatedly cited as examples of interference.

Another area where the claims are made that the carriers are unduly burdened is in the area of safety legislation. Claims are made that bills substantiated or supported in the name of safety are nothing more than make-work or "featherbedding" measures.

It is our view that safety legislation, under the jurisdiction of the Interstate Commerce Commission, applicable to the domestic surface transportation industry, is essential. It is our experience that spot checking of safety measures of the carriers has led to an improvement in their safety experience. We have a relatively small staff in this area compared to the volume of movements in the industry.

The safety regulations issued under the legislative authority granted to the Commission receive constant review and we initiate changes in these regulations whenever they are appropriate. We are also sympathetic to receiving representations by interested persons for appropriate changes in these regulations.

There is ample evidence, much of which has been incorporated in our annual reports to the Congress, to show the improvements in safety which have come about, based, we believe, in large respect, on the safety legislation under the jurisdiction of the Commission. We have no doubt that improved safety experience serves the advantage of the carriers at least as much as it serves the public interest.

In summary, with regard to the ability of the domestic surface transportation industry to operate in support of national defense in time of mobilization, it is our view that the industry has the experience and skill and, generally speaking, the plant to do the job that may be required of it. We believe that we should make use of this great reserve of transport strength to the maximum extent possible during mobilization without unnecessary regulation. As far as possible, the current ownership of the transportation industry and its regular methods of operation should continue unless or until there is some good reason to impose governmental controls or other requirements.

By the same token, shippers should continue to approach the transportation industry directly with their requirements, keeping in mind any necessary priorities, orders, and so forth, which we have discussed elsewhere in this presentation. We should then add any additional controls over the so-called standby controls only to the extent required by the type of emergency, mobilization of defense activity.

To make sure that Government and industry are ready to act forthwith in any type of emergency, advance planning is mandatory, and the Commission should be ready to plunge into or support emergency governmental activity. By the same token, we should encourage the industry to prepare for such an emergency.

It is clear that many of the mobilization planning activities which we have to carry on in Government before an emergency should also be paralleled in industry. These would include such matters as provision for dispersal of key management and storage of necessary records; cross training of key personnel; encouragement by Government and industry of changes in equipment, operations, et cetera, to make possible more rapid and flexible adjustments.

For example, in industry, the "piggyback," "fishyback" and containerization programs; and, interchangeability and standardization of various types of equipment; and, in Government, planning and organizing to become part of an overall emergency transport agency which would regulate all transportation, with the Commission being responsible for staffing and supporting the domestic surface transportation components—with the help of executive talent from industry.

We have organized an Interstate Commerce Commission unit of the national defense executive reserve to make use of the know-how of industry key personnel for planning and to assist during an emergency period, both on the Washington level and to operate in the field.

RECOMMENDATIONS

We have the following recommendations and suggestions to help secure a domestic surface transportation industry adequate to support the defense effort in the event of mobilization:

1. We believe that all forms of transportation should be regulated impartially. We favor whatever legislation may be required to bring about equality to the extent it does not now exist. No doubt the current Senate investigation into the state of regulation of the transportation industry, and the similar study by the Department of Commerce, will apply themselves to this area.

2. The railroad industry should do everything in its power to improve its economic health through such avenues as (1) installing elec-

tronic accounting, improved communications systems, more highly mechanized track maintenance, motorized freight handling, centralized traffic control; (2) eliminating duplicative facilities such as multiple yards and terminals which cause expensive interchange operations and excessive loss and damage claims; and (3) consolidations, pooling of traffic, standardizing equipment, internal reorganizations, and so forth. Improvements of this kind have not been fully exploited. They are highly productive in promoting more net on the same gross revenues, yet aggressive efforts in this direction are not yet adequately apparent.

3. Rail carriers traditionally have followed the practice of accelerating and diminishing orders for equipment with the rise and fall of business. Considering the necessary interval between the time the order is placed and the time of delivery, substantial increases in business are invariably accompanied by an equipment shortage. In addition, by reason of these peaks and valleys in orders placed with manufacturers, the cost of cars exceeds what it would be if purchases were made more uniformly.

We believe also that costs could be reduced, and at no attending disadvantage, by greater standardization of car design to provide for assembly-line production.

I said earlier that there has been considerable study toward standardization of equipment and elimination of the diversity in parts for freight car construction; however, failure to adopt standard equipment specifications is depriving the railroads of savings that could be made.

Further, this failure would in many instances bar interchanging parts among railroads during emergencies. We estimate that if the 78,000 freight cars built in 1957 alone had been built according to standard specifications, that at least $40 million would have been saved by the class I railroads out of the total of $682 million spent for freight cars that year.

In view of the recurring critical shortages of freight cars experienced by the Nation, it is imperative that the ownership of such equipment be increased and maintained on a level which will meet the needs of the shipping public during normal times and provide a reasonably adequate supply during periods of emergencies.

In this connection, S. 1789, to amend section 1(14)(a) of the Interstate Commerce Act, to insure the adequacy of the national railroad freight car supply, was reported out on June 29 by the Senate Committee on Interstate and Foreign Commerce.

This bill would authorize and direct the Interstate Commerce Commission, after hearing, to prescribe car rental or per diem charges, to be paid by the using railroads to the railroads owning freight cars, upon a basis which would encourage the acquisition and maintenance by the railroads of a car supply adequate to meet the need of commerce and of the national defense.

The bill's main purpose and objective, an adequate national fleet of freight cars, would be accomplished by providing incentives for increased car ownership through operation of economic laws and the profit motive.

In addition, enactment of the bill would contribute to sound car service practices by promoting more expeditious movement of existing equipment. Finally, it would provide just compensation to freight

car owners by recognizing the value of the use of such equipment, and would correct the inequities which are prejudicial to the interests of car owners. Obviously, a more adequate supply of freight cars would provide more freight cars in times of mobilization.

4. Provision should be made, perhaps supported by legislation, to stockpile critical components and spare parts for freight and passenger cars; to stockpile certain equipment now being abandoned as obsolete; for example, barges and passenger cars; to stockpile certain facilities; for example, steel-structuring of overpasses; and to stockpile specialized steel.

5. We believe that alleged uneconomical labor practices whether on the part of management or labor, should be explored.

6. As a general proposition, we believe that passenger train service should be self-supporting; that urban and interurban commuting services which need subsidization should be subsidized by the communities served and not by freight shippers throughout the country.

7. We believe where consolidations of railroads would produce substantial economies without sacrificing service to shippers or otherwise affecting the public interest adversely, they should be encouraged. The railroads should initiate action for practical proposals of this kind.

8. We believe that great economies can be effected and services improved by greater coordination of transport operations. This includes coordination among carriers of the same mode, as well as coordination among carriers of different modes, such as is represented by "piggyback" and "fishyback" operations.

9. Admittedly, planning and preparing for any type of large-scale emergency operation is a never-ending job. What you may accomplish in planning today may be out of date tomorrow. Probably the two most important changes in thinking which have required the junking of many plans, are the availability of extremely destructive and rapidly deliverable missiles, and new thinking in the last several years on the fallout menace in case of attack.

For the past year, the Commission has been more or less in a state of suspended animation in its national defense and mobilization planning due to a complete lack of funds for this purpose. We are hopeful that an appropriate portion of funds made available to OCDM for fiscal year 1960, will be allotted to the Interstate Commerce Commission for carrying out delegated responsibilities in the field of civil and defense mobilization planning and operations.

Upon provision of funds, we would renew our efforts as follows: (*a*) Revitalize the Interstate Commerce Commission unit of the national defense executive reserve; (*b*) up-date basic inventories of transport facilities; (*c*) renew our national transportation damage assessment activities; (*d*) develop current data on manpower and material requirements of the transport industry for mobilization; (*e*) participate in facilities protection and industry defense activities and encourage the industry to participate; (*f*) review and up-date self-initiating transport mobilization orders; (*g*) study commodity traffic movement data and forecasts to determine in advance where the heaviest traffic will come and make plans therefor; (*h*) assist civil and defense transportation operational officials at the local Government levels; (*i*) review transport industry mobilization planning; and (*j*) up-date mobilization plans, manuals, data, statistics, factors, and so forth. To the extent the Commission could revitalize its

mobilization activities, it would also encourage the industry to make voluntary plans and preparations.

We appreciate the opportunity to appear today, and will be glad to answer any further questions.

Mr. KILDAY. The committee appreciates the comprehensive analysis that you have brought us of the transportation situation. We thank you very sincerely for the statement. Are there questions?

Mr. SANDWEG. Yes, I wonder if the Commission would supply for the record the Executive orders concerning the ICC issued by the President that you mentioned on page 2. Your part in the civilian defense mobilization?

On page 30 you mentioned the digest of orders that have gone out to industry. Could we have copies of those for the record?

Mr. TUGGLE. Yes.

Mr. SANDWEG. On your last page, where you indicated that, "Upon provision of funds, the ICC would renew our efforts as follows:"

It appears to me that a number of the things that the ICC plans to do there are pretty much duplicative of the OCDM. I wonder wherein does your planning overlap the authority or the jurisdiction or the responsibility of the OCDM?

Mr. TUGGLE. It is my understanding that if funds are made available, OCDM will delegate certain planning functions regarding transportation to us with enough money out of their appropriation to carry on the work. It is not intended there be any duplication.

Mr. SANDWEG. Is it not possible for the OCDM to do that now under present regulation?

Mr. TUGGLE. OCDM is somewhat of a mystery to me. I don't know what they are doing.

Mr. SANDWEG. I noticed with interest your statements on car shortages and factors of that kind, and yet Mr. Jones of OCDM yesterday stated that his office had made no studies of rolling stock.

I wondered if there is any difficulty in supplying information between the two agencies which if it could be overcome would work to the benefit of the country on mobilization planning?

Mr. TUGGLE. The figures, of course, are made public every week as to the status of car supply. We release a report on that. They are available. As to what additions to the car fleet might be necessary is a matter of opinion.

We are of the opinion that the railroads do not have enough freight cars now. We have recommended to the Congress, the Senate has reported the bill out favorably, that additional legislation be enacted to let us issue per diem orders that will be an incentive to the railroad industry to construct more freight cars.

Mr. SANDWEG. I have one other question, Mr. Chairman. In that category you mentioned the stockpiling of passenger cars and kitchen cars by the military transport. You indicate the need for additional freight cars. Do you think stockpiling might be the answer, of used freight cars that perhaps might be retired, and, if so, should that be at Government expense?

Mr. TUGGLE. The stockpiling of freight cars that are ready to be retired might not be practical. They would be very old, more than 25 years old, maybe 30 years old.

I am speaking offhand. I would doubt the wisdom of stockpiling such old equipment because of the major repairs that would be necessary to put it in serviceable condition.

Mr. SANDWEG. Then if we have a critical shortage in passenger and freight cars, do you believe that the Government should get into the field of assisting the railroad in providing additional equipment of this nature, since it is planned or thought that the Government, itself, will be a tremendous user of these things, and any shortage will affect us adversely?

Mr. TUGGLE. May I answer your questions separately. First as to passenger equipment. As of now, there are only a few more than 4,000 sleeping cars in the country. That figure is going down, has been at least in the last few years at the rate of about 400 a year. I think every one of those should be acquired by defense and stockpiled.

As to freight cars, if I understood your question, it was whether the Government should stockpile them. I am not prepared to give a firm opinion on that, but I believe it is possible to make changes in some of the tax policies of the Government which would enable the railroads to acquire an adequate freight car fleet without the Government being directly involved.

Mr. SANDWEG. That is all, Mr. Chairman.

Mr. KILDAY. Thank you. Mr. Van Zandt.

Mr. VAN ZANDT. Mr. Chairman, on page 5 of your statement, I think that you definitely reveal my concern about the adequacy of transportation needs in the event of an emergency when you say, "We consider the current situation to be serious," and you go on to say that we should be carrying on many important activities to prepare for the participation of the domestic surface transportation industry in any war effort.

That leads me to this question: Has the ICC ever been furnished the needs of the Department of Defense in the event of a full scale mobilization?

Mr. TUGGLE. Are you referring to mobilization of manpower or total mobilization?

Mr. VAN ZANDT. Manpower as well as equipment, and so forth.

Mr. TUGGLE. In our passenger train deficit inquiry they did furnish some figures as to passenger cars. As of now, and assuming a 6-month mobilization period, there would be adequate coaches. But it would cut down on those available for civilian use by about 50 percent. They would be short a few hundred in sleeping cars.

Mr. VAN ZANDT. What percentage of the civilian use would be affected?

Mr. TUGGLE. If I recall the figures, there are about 12,000, or 13,000 coaches in operation now. I believe they estimate they would need about half of them on a 6-month mobilization buildup.

Mr. VAN ZANDT. Half of the present or existing facilities for the traveling public would be taken away and applied or employed by the Department of Defense.

Mr. TUGGLE. That is my understanding.

Mr. VAN ZANDT. What about the freight equipment, the flatcars and boxcars and gondolas, special type of cars?

Mr. TUGGLE. We believe the freight car fleet is inadequate now. As you know, there are periodical car shortages. You and many of the Members of Congress I am sure, receive from their constituents complaints that they can't get cars. That is occasioned by the fact that there are not enough serviceable cars where they are needed by

shipper demand. I don't mean a boom demand but when the railroads are moving the winter grain, for example, or the agricultural products in the fall. There are heavy movements of ore during the summer months, heavy movement of coal at certain times.

If every car could be on the railroad siding in the part of the country where it was needed at any given moment, there might be enough. But we need some elasticity because this is a country of vast differences, and goods move thousands of miles.

They need some excess cars above what would theoretically be adequate if everything were perfect.

Mr. VAN ZANDT. Then it is proper for me to assume when you say you consider the current situation to be serious that it applies to both passenger and freight car equipment?

Mr. TUGGLE. It does, yes, sir.

Mr. VAN ZANDT. We have been talking about mobilization, Mr. Chairman. In the event of an all-out nuclear war, and I take from your statement that you must have read the findings of the Holifield committee which recently conducted the hearings, a series of hearings on the effects of fallout, not in the event of an all-out nuclear war, isn't it proper to assume that some of our big industrial communities will be knocked out?

Mr. TUGGLE. Yes, sir.

Mr. VAN ZANDT. Let's take the Pittsburgh area for an illustration. I imagine that in the Pittsburgh area today there are possibly several hundred passenger cars and probably thousands of freight cars. If they took out Pittsburgh and the resultant contamination which denied access to that area for possibly a month and up to 3 months, it all depends on the type of weapon that was used, what would that do to the rest of the country, and I am thinking of the passenger car equipment and freight car equipment?

Mr. TUGGLE. Obviously there wouldn't be a great deal of movement in many parts of the country of passenger car equipment during a fallout period, which we might assume might last a week to a month. There would certainly be large areas where it would not be safe to go in without certain decontaminating procedures. It would have a terrific impact on the resources of carriers. That is complemented in part by the fact that carriers wouldn't have as much traffic to move, perhaps, because the steel industry in Pittsburgh would be shut down during that time, and that is one of the major commodities hauled by the railroads serving Pennsylvania. There would be a balancing off of demand against supply.

Mr. VAN ZANDT. Isn't it safe to assume that if they take out Pittsburgh, they would take out Chicago and Los Angeles?

Mr. TUGGLE. Yes.

Mr. VAN ZANDT. It would be a confused situation. I take it from your statement that because there are no funds, the ICC has been denied the right to really get into this problem, and prepare the type of a program that would be employed in the event of an emergency.

Mr. TUGGLE. That is correct. We are not working on any mobilization planning whatever now.

Mr. VAN ZANDT. You think it is necessary?

Mr. TUGGLE. Yes, sir.

Mr. VAN ZANDT. With regard to stockpiling and necessary equipment and the kits that have been mentioned, do you think that it is

possible to really develop a kit that would help relieve any situation that resulted from an all-out nuclear war?

Mr. TUGGLE. I will have to plead ignorance on that. I am not familiar enough with the mechanics of it to give any answer.

Mr. VAN ZANDT. You are familiar with the fact that equipment could be converted?

Mr. TUGGLE. Yes.

Mr. VAN ZANDT. And I am thinking now of World War II when they took a boxcar and strengthened it a bit, probably changed the type of truck and carried passengers, troops aboard. I am thinking of the hurried conversion of pullman equipment to hospital trains, but you have to have the basic equipment before you can get into it and that is what we lack.

I have many questions, Mr. Chairman, but I must say your recommendations have answered most of them. I want to join the chairman in commending you for this very comprehensive report. It is really very interesting. I am sure it is going to help us in trying to reach the conclusion that represents the objective of these hearings.

Mr. TUGGLE. We hope it will be helpful.

Mr. COHELAN. Just a small question, Mr. Chairman. Mr. Tuggle, I was interested in your observation about the current inventory of passenger cars, but I didn't follow you in the latter part of your remark.

Did I understand you to say that there are about 400 of these cars which are being phased out or removed from operation?

Mr. TUGGLE. Removed from service each year.

Mr. COHELAN. Per year or month?

Mr. TUGGLE. Per year.

Mr. COHELAN. It was your recommendation that we stockpile these cars?

Mr. TUGGLE. I think the Department of Defense should stockpile these cars. They have about 1,500 now, I think.

Mr. COHELAN. They are not doing that at this time?

Mr. TUGGLE. I am not aware of any such program.

Mr. COHELAN. That would be your recommendation?

Mr. TUGGLE. Yes, sir.

Mr. COHELAN. Thank you very much.

Mr. KILDAY. Thank you, Mr. Tuggle.

Thank you, gentlemen of the Commission for coming. You have been very helpful to us.

Mr. Sandweg, were there statements to be placed in the record?

Mr. SANDWEG. That is all.

Mr. KILDAY Thank you, gentlemen, for coming. We will stand adjourned until 10 o'clock Wednesday of next week.

(Whereupon, at 11:35 a.m., the subcommittee adjourned to reconvene at 10 a.m., Wednesday, July 22, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

WEDNESDAY, JULY 22, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

EXECUTIVE SESSION

The subcommittee met at 2:10 p.m., the Honorable Paul J. Kilday (chairman of the subcommittee) presiding.

Mr. KILDAY. The committee will be in order.

Mr. Sandweg, I believe you have something to insert in the record before we get started.

Mr. SANDWEG. Yes, Mr. Chairman. We have received a communication from the Office of Civil and Defense Mobilization concerning a matter that was brought up at the hearings on the 16th of July with reference to whether the Department of Defense had submitted its requirements to the OCDM for the latter's test exercises. That should be inserted in the record to bring it up to date.

Mr. KILDAY. Without objection, it will be inserted in the record at this point.

(The letter referred to is as follows:)

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF CIVIL AND DEFENSE MOBILIZATION,
Washington, D.C., July 21, 1959.

Hon. PAUL J. KILDAY,
Chairman, Subcommittee on Transportation, House Committee on Armed Services, Washington, D.C.

DEAR MR. CHAIRMAN: During the hearings of your subcommittee on July 16, 1959, I was questioned with regard to the determination of transportation service to meet national requirements for mobilization and for nuclear war. One question was to the specific point: Had the Department of Defense furnished their total requirements for transportation to the Office of Civil and Defense Mobilization? I found it necessary to reply in the negative. However, this response, without proper qualification, was misleading and could be subject to misinterpretation. I therefore submit for the record the following clarifying statement and references.

The Department of Defense has always been most cooperative in transportation matters, and the two-way exchange of information with my office has been growing in recent months. That this is also true in other areas I regard as equally important, for transportation is only one element in Defense's overall requirements for national resources and cannot very well be viewed without reference to the whole.

The channels of communications by which DOD makes known military wartime requirements for air transportation and ocean shipping are so well established that I hardly need mention them. It is sufficient to say that OCDM delegate agencies in the Department of Commerce (DATA and Maritime) are regular

negotiators with the Office of the Secretary of Defense and with MATS and MSTS in arriving at the proportions of active and reserve aircraft and ships to be allocated to the support of military operations.[1] In matters of domestic surface transportation, however, the channels are not so clear and the determinations never so exact. This is not the fault of Defense.

Nor is it the fault of any other Government agency. The real difficulty lies in the nature, scope, and complexity of the industry itself, coupled with the human inability to plan accurately the possible course of future events.

The prediction of transportation needs is difficult by reason of the fact that transport cannot be inventoried, stocked and issued as a commodity. The computation involves many variables: What vehicles will be needed where and for what loads, when, and how will this accommodate other loads at other places. It requires a thorough knowledge of physical capabilities against which to project the needs and intentions of shippers. Any missing segment of data can throw the whole thing off; it must be viewed in total.

The military services actually pioneered the forecasting of transportation requirements.[2] However, the statistical analysis of limited military transport services in World War II was grossly different from one based on an assessment of domestic commercial requirements where reliance had to be upon inadequate census data and the business predictions of carriers.

The first attempt at comprehensive analysis was undertaken by the Office of Defense Transportation in 1942.[3] This wartime agency established short, midterm, and long-range forecasting of traffic movements, copied after the Shippers' Advisory Board procedures of the Association of American Railroads, and involving most of the agencies of government as well as the carrier groups. This system was continued for a time by the ICC, but gave way in the postwar period to long-range forecasting based on growth trends, economic projections of gross national product, and the possible repetition of the traffic adaptations which occurred in World War II. The most important of these studies were the Johnson report,[4] the comprehensive documents of the Conway Committee,[5] and the Lyrla study.[6] The consensus of these was that transportation could not meet both civil and military needs, and there would likely occur serious rail car shortages in any future national mobilization.

Changes in concepts of warfare, rather than commercial trends, outdated these reports. With the growing possibility of nuclear attack on the Nation, transportation became more and more a factor in larger considerations of a surviving economy. Since rails and roads would make out better than people and factories, it was argued, why be concerned too much with them.

The Defense Transportation and Storage Committee which considered these matters following the Korean crisis, was composed of representatives from civil agencies having transportation interests and the Department of Defense. This group was faced with such fast changing planning assumptions and shifts in traffic patterns that it found all attempts at reliable forecasts to be extremely difficult. Instead it evolved procedures[7] for a postattack transport control agency which, while taking cognizance of the inability to project total needs, would be the troubleshooter for "unfulfilled requirements."

The new machine analysis techniques of ODM's National Damage Assessment Center, meanwhile, offered possibilities for bringing both transport capability and traffic demand aspects of forecasts again into manageable form. The ICC's Transport Mobilization Staff formulated standard criteria[8 9] by which requirements of civil and military agencies could be brought together for comprehensive

[1] AR 55-22, AFR 75-93, OPNAVINST 4600.5A, NAVMC 1173, "Transportation, Allocation of Transport Space," Feb. 12, 1958. (May be obtained from DOD.)

[2] Historical Rept. No. 11, "TC Planning for Mobilization Readiness," Department of the Army, Office of the Chief of Transportation, Aug. 15, 1957. [May be obtained from DOD.]

[3] "Civilian War Transport, a Record of the Control of Domestic Traffic Operations," by the Office of Defense Transportation, 1941-46, reference pp. 87-94, inclusive. [May be obtained from National Archives or the ICC.]

[4] "War Mobilization of Railroads in the United States," recommendations of the Railroad Transport Task Group, National Security Resources Board, Sept. 22, 1949 [76134/app. D]. [May be obtained from OCDM.]

[5] "Summary of Findings and Recommendations of the Consultants Committee on Railroad Equipment, ODM," transmitted by letter to Director of ODM from Granville Conway, Apr. 8, 1955. [May be obtained from National Archives or ICC.]

[6] "The Mobilization Readiness Program for Domestic Transportation," Interstate Commerce Commission [prepared by Keith Lyrla], July 19, 1955. [May be obtained from ICC or OCDM.]

[7] TSC information-93, "Plan for the War Transport Administration," Feb. 27, 1956. [May be obtained from OCDM.]

[8] Memorandum to Mr. George A. Landry, ODM from Francis A. Silver, ICC, subject: Criteria for Transportation Requirements [Traffic Forecasts] for Use During Operation Alert Exercises. [Attached.]

[9] Exercise memorandum to: Federal agencies participating in Operation Alert 1957, subject: Forecasts of Major Domestic Transportation Movements, ICC, June 20, 1957. [Attached.]

analysis. Department of Agriculture, Atomic Energy Commission, General Services Administration, and others responded during Operation Alert 1957.

Meanwhile, the Department of Defense was called upon and was able to present estimates of its wartime needs for transportation to the Smathers committee [10] and to hearings on the rail passenger car deficit conducted by the Interstate Commerce Commission.[11] The DOD transportation experts were aware at the time of these presentations that they were giving a segmentized picture apart from essential civil needs, and that the work OCDM was undertaking with civil agencies was necessary to complete the picture.

Earlier this year OCDM gave its concurrence to a Joint Chiefs of Staff procedure [12] by which DOD transportation requirements could be developed and transmitted in a form compatible with what had been proposed for other Government "using" agencies. During both Operation Alert and a NATO support exercise, Snapswitch, this year, OCDM has requested and been furnished military simulated requirements [13] for the transportation phase. These are being played against equally heavy civil survival requirements in a postattack situation. Out of this "play" we expect to derive substantial mutual benefits in analytical methods leading to decisive wartime actions in transportation.

At the same time, we are aware that there are still inadequacies in the national census of transport capabilities with which we must work and in the data currently available at the National Damage Assessment Center for our ready use. The difficulties experienced by agencies other than Defense in compiling and reporting resource needs indicate that further instruction and guidance would be helpful.[14] Nevertheless, we are encouraged by efforts such as those being undertaken under the direction of Assistant Secretary of Defense, Hon. Perkins McGuire, and which are to be presented to your subcommittee. Capability and requirements data developed by Maj. Gen. I. Sewell Morris' staff in the Military Traffic Management Agency are the most comprehensive and reliable estimates yet put together.[15]

I trust that this information will be of assistance to the subcommittee.

Sincerely,

OWEN R. JONES,
Deputy Assistant Director for Transportation.

STATEMENT OF THE HONORABLE E. PERKINS McGUIRE, ASSISTANT SECRETARY OF DEFENSE, SUPPLY AND LOGISTICS

Mr. KILDAY. Now, we have with us this afternoon the Honorable E. Perkins McGuire, Assistant Secretary of Defense, Supply and Logistics.

Mr. Secretary, we will be glad to have your statement in the manner in which you prefer to give it.

Secretary MCGUIRE. Thank you, Mr. Chairman.

Mr. KILDAY. If you will just go ahead in your own way.

Secretary MCGUIRE. Mr. Chairman and members of this subcommittee, I appreciate the opportunity of opening the Department of Defense phase of your hearings concerned with the adequacy of domestic transportation as it relates to meeting defense requirements for mobilization.

Mr. KILDAY. May I state, at this point, this is executive session. All those present must be cleared and entitled to be in the executive session. Is everyone present cleared?

[10] "Problems of the Railroads," hearings before the Subcommittee on Surface Transportation of Committee on Interstate and Foreign Commerce, U.S. Senate, 85th Cong., Mar. 24–28 and Mar. 31, 1958. [General Browning testimony on pp. 1804–1815.]

[11] ICC docket No. 31952, "Passenger Deficit Case," testimony of Department of Defense witnesses in report, pp. 88–91, inclusive, May 18, 1959.

[12] JCS 2154/15 subject: Review of Certain Studies Relating to the Allocation of Transport Space [July 27, 1959]. [May be obtained from Joint Chiefs of Staff.]

[13] Resources and production program memorandum No. 3, "Transportation Guidelines for OPAL 1959," Office of Civil and Defense Mobilization, Apr. 17, 1959. [Attached.]

[14] Pt. II, "Agency Statements on Transportation Dependence," report to the Joint Committee on Defense Production on Status of Transportation Mobilization, OCDM, Mar. 31, 1959. [Previously furnished to the subcommittee.]

[15] Testimony of Gen. I. Sewell Morris, MTMA, to the Subcommittee on Transportation, House of Representatives, Committee on Armed Services, to be given on July 23, 1959.

Mr. SANDWEG. They are, Mr. Chairman.

Mr. KILDAY. You go ahead, Mr. Secretary.

Secretary MCGUIRE. As discussed in our exchange of correspondence, and in meetings with your staff, I have arranged for a general briefing to be presented by the Military Traffic Management Agency on our current planning relative to military requirements for transportation and the relationship of this planning to the capability of the various modes of the domestic transportation systems. It is our intention through this briefing to provide a basis which will assist you in correlating statements to be presented by representatives of each of the military departments, the Military Sea Transportation Service and the Military Air Transport Service. The briefing and statements will incorporate answers to questions which you furnished earlier.

At this point I would like to place special emphasis on the fact that our briefing and statements are confined to military requirements necessary to support strategic plans and concepts, and their impact on the various modes of transportation. Accordingly, the information we will provide does not take into account civilian requirements and their impact on transportation resources. I understand that you have arranged to have the civilian requirements for transportation under mobilization conditions provided by other sources.

Transportation activities at the Secretary of Defense level are an integral part of my responsibilities as the Assistant Secretary of Defense, Supply and Logistics. From this vantage point, where major logistics policy for materiel requirements, inventory management, distribution, and movement of materiel, supplies, tools, and equipment are promulgated, the importance of the effective utilization of our total transportation capability is constantly brought to the forefront. Briefly stated, realistic requirements, along with adequate transportation capability, effective control, and efficient management techniques in the utilization of our transportation resources, are among the elements of logistics, without which effective defensive or offensive operations are not possible.

In the immediate years following World War II, changes in war planning concepts brought about the need for continual reevaluation of plans for the use of transportation resources in support of military missions. In more recent years, changes in requirements have become more drastic when viewed in the light of past experiences. The significance of these changes and their effect on our current planning will be clearly noted in the presentations to follow.

Before introducting other Department of Defense witnesses I would like to emphasize two points of particular importance in considerations dealing with this subject:

The first point concerns the changes which have occurred in utilization of the various modes of transportation between World War II and the present time, and their capability to meet military requirements, both of which have had a significant effect on our planning. In particular, we must take into account the growth of the air and highway systems. Each of these modes of transportation have expanded in size and types of services offered to such a degree that it is difficult to compare their role in the scheme of things with the part they played, say, 15 or 20 years ago.

The second point relates to the planning concepts upon which requirements are based. Historically, we have had both time and space

advantages after the initiation of hostilities in which to expand our forces and provide for their support. The advent of nuclear weapons, in combination with swift means of delivery, has denied us these time and space advantages in the event of a general nuclear war.

In cases of limited war we would be able to provide the immediate requirements for the conflict by mobilizing our resources. In addition to supporting a limited war the objective of such mobilization would be to maintain and improve our military posture to meet a general war should one ensue.

I believe it important to mention that the Department of Defense is currently engaged in its continued efforts to up-date requirements programs for transportation. In the past it has been the practice in transportation planning to treat domestic and oversea programs and requirements pretty much as separate entities. This, however, is no longer the case. I recently initiated a program for transportation planning which directs that the requirements to be placed on all domestic systems, ocean systems, and international air systems be determined from the same approved plan. This program also requires that the demand on each system be phased into each other so as to insure the coordinated and timely planned flow of materiel and personnel to their points of destination. Under this program refined and validated requirements are in the process of being compiled which will depict the total Department of Defense transportation requirements for the various modes of transportation. The results of activities under this program are expected to be known during the fall of this year.

Turning now more specifically to the presentations prepared for you, I would like to emphasize that the basic briefing will be provided by the Executive Director of the Military Traffic Management Agency, Maj. Gen. I. Sewell Morris. His presentation will encompass the current attempt, and I might add the first of its kind, to develop total domestic military requirements planned to be imposed on the domestic transportation systems. The requirements are based on information developed by the military departments and supplied to MTMA for consolidation, analysis, and conversion to requirements, expressed in transportation units. Even though the estimated requirements are preliminary, in the light of the conditions on which they are based, we consider them to be a clear indication of the trends that are occurring.

We have planned to have representatives of each of the military departments to first present a description of their respective processes for the development of transportation requirements. Following these statements, we suggest that the Military Traffic Management Agency briefing be presented. Following the briefing, the Executive Director and commander of the Military Sea Transportation Service and of the Military Air Transport Service are prepared to present a statement on the planned capability and the adequacy of MSTS and MATS to meet requirements generated from the domestic transportation system. The representatives of the Department of Defense will be introduced as they are scheduled to appear. I believe that by following this schedule, we can provide you an orderly and comprehensive presentation of our transportation planning activities.

And I might at this point, Mr. Chairman, add that although my statement has been classified due to its covering certain aspects of this, we would be glad to work with your staff on a declassified version

of this, if it be your desire for purposes of any report you might want to publish.

And I think that would also obviously apply to any of the other presentations.

Mr. KILDAY. That would be very helpful.

Secretary McGuire. It has been our approach in this, to try to give you all of the information we have, so that you would have the background and understanding of this complete picture.

With your permission, I would like now to introduce Maj. Gen. Frank S. Besson, Jr., Chief of Transportation, Department of the Army, who will describe the transportation requirements development process within the Department of the Army.

General Besson.

Mr. KILDAY. Thank you, Mr. Secretary.

Secretary McGUIRE. We will be here for the rest of the afternoon, Mr. Chairman, as we consider this as a team presentation to you.

Mr. KILDAY. We appreciate that, Mr. Secretary.

General Besson, will you come around.

Will you proceed with your statement, General.

TESTIMONY OF MAJ. GEN. FRANK S. BESSON, CHIEF OF TRANSPORTATION, DEPARTMENT OF THE ARMY

General BESSON. Mr. Chairman, my name is Frank S. Besson, Jr., major general, U.S. Army. I am Chief of Transportation, Department of the Army. My appearance here today on behalf of the Department of the Army is at the direction of the Secretary of the Army, and is in response to the invitation to testify at these hearings extended to him under date of June 15, 1959, by the chairman of this subcommittee.

In accordance with the request by the chairman, my testimony will describe in general how the Army requirements for commercial transportation within the continental United States are developed and presented to the Military Traffic Management Agency.

You have a copy of my formal presentation. Included in that formal presentation are a number of charts, of which I have duplicates here, and I propose to make my presentation by reference directly to the charts.

First, what I propose to cover. The present method of developing Army mobilization requirements for the movement of persons and things within the continental United States.

Secondly, an illustration of the development of these requirements for a specific unit.

As you know, we have numerous war plans. Here are the two plans under which we have developed requirements to date and submitted them to the Military Traffic Management Agency.

These are the sources of our requirements. They originate in the joint war plans. Now, these joint war plans translate national objectives and policies into military objectives, military strategy, military undertaking, and military tasks. From these joint war plans we develop Army war plans which apply the Army resources to the commitments made under the joint war plans.

Deriving from the Army war plans are mobilization troop programs, which give us specifics on how the units will be employed.

In detail, the mobilization troop program provides us information on the mobilization period of the unit; that is, when it comes into being. It covers the units; the present locations, where they will be assigned, their maneuver area and the month that they go to maneuver area, the deployment area, and the month that they go, and the strength of the unit.

Now, when I go into the details of the development of unit movement requirements I will clarify exactly what information is furnished under this mobilization troop program.

We then get into how we develop our personnel movement requirement.

First, from the mobilization troop program, we get our unit schedules. Those unit schedules give to the Chief of Transportation information on movements, covering origin, destination, and phasing.

Now, in addition to the information we get from the troop program we also get information from the Surgeon General, who gives us information on medical evacuation programs. We get information from the Deputy Chief of Staff for personnel of the Army, who gives us information on fillers and replacements to bring these units up to full strength and keep them up to strength. And, finally, from the overseas commands we get information on their evacuation plans, covering civilian evacuees.

Now, in the data which we have furnished to date to the Military Traffic Management Agency we have not included the movement requirements for these civilian evacuees because there is some question as to whether we should compute those movement requirements within the continental United States or whether they should be computed by the civilian authorities.

All of these agencies then generate requirements, all of which are consolidated by the Chief of Transportation with respect to the Army, giving the origin of movements, the destination, and the phasing. And this information in turn is given to the Military Traffic Management Agency.

Now, the situation is somewhat similar for our freight movement requirements. From the mobilization troop program we get the listing of our units and the scheduled month of movement. From each unit's table of organization and equipment we know what kind of material has to be moved, and estimated tonnages by categories—ammunition, vehicles, and general supply. The origins, the destinations, the phasings of the various movements, and any special requirements—for example, heavy lift flatcars and that sort of thing—are also developed from the table of organization.

In addition, from the technical services—we have seven technical services in the Army who divide the supply responsibilities for the Army—we get additional information which covers those things which are not directly related to the units.

Now, to the specifics. Let us assume that we took from the mobilization troop program the 158th Infantry Division. We know from the program it has a strength of 13,748 people. It will be called into service in the first month of mobilization. This unit is generally located in the 5th Army area. It will be concentrated on its initial assignment at Camp McCoy. It goes to Fort Hood in the sixth month for maneuvers. It is deployed into an overseas area designated "R," in the eighth month.

It operates under a specific table of organization and equipment, which gives us details as to the type of equipment that this unit has.

Mr. VAN ZANDT. Is that 7000–T a number to identify equipment?

General BESSON. That is a number which identifies the table or organization.

Mr. VAN ZANDT. Table of organization.

General BESSON. And every different type of unit has a different table of organization, which you then pull out. It lists the equipment that the unit has or is supposed to have.

Secretary MCGUIRE. Mr. Van Zandt, this is subject to some change. This is a standard table. And if you are going to send a unit, let's say, into Greenland, you would make certain modifications to it. Or if you were to send it to Africa, you would make different modifications.

Mr. VAN ZANDT. It represents a table of organization?

Secretary MCGUIRE. That is right.

General BESSON. And equipment.

Mr. VAN ZANDT. The table of organization is designed, I imagine, to meet certain conditions.

General BESSON. This table of organization and equipment is generally designed to cover a general situation. There are procedures to establish modification to it to take care of deployments into specific areas or for specific tasks and missions. That is generally done by deletions or additions to the table for the specific purpose.

Mr. COHELAN. General, does this assume a mobilization period?

General BESSON. In this particular case. This was under a concept where we have the mobilization period, where it would be called in during the first month.

Mr. COHELAN. I see.

General BESSON. Our personnel movement requirements, then. In developing personnel movement requirements, for the unit moved, we get information on the assignment area, maneuver area, deployment area, and any special transportation requirements, for example, the requirement to fly overseas an advance party.

From the Deputy Chief of Staff for Personnel we get information on the filler personnel required to bring this unit up strength and keep it there.

Mr. VAN ZANDT. Now, General, this unit that we are talking about here, using it as an example—is that a regular Army unit?

General BESSON. This would not be a Regular Army unit, sir.

Mr. VAN ZANDT. This would be a Reserve unit?

General BESSON. This would be a Reserve unit generally in the 5th Army area, with elements scattered through the 5th Army area, which when called to mobilization under this assumption would be called for activation at Camp McCoy.

Mr. VAN ZANDT. Within 30 days?

General BESSON. In the first 30 days.

Mr. VAN ZANDT. In the first 30 days.

General BESSON. This is just a typical unit picked. We have them scattered from the first month through the sixth month. A Regular Army unit would be in existence on M-day.

Mr. BECKER. Mr. Van Zandt said within 30 days, and you said in 30 days. Now do you mean up to 30 days?

General BESSON. This is—from the table we get specific dates, I believe. They actually give specific dates. In this particular case we said it would be called up during the first month.

Mr. BECKER. During the first month.

General BESSON. Actually our mobilization program will be specific as to the dates and it might even be specific down to the elements of this unit.

Mr. BECKER. I see. Thank you.

Mr. VAN ZANDT. Now the equipment that we are going to get into here in a moment—is that already at McCoy?

General BESSON. Not necessarily. And I will cover that in a little bit here.

Mr. VAN ZANDT. All right.

General BESSON. But, generally speaking, it has some equipment of its own for training purposes in its Reserve status. This equipment must be added to.

Mr. VAN ZANDT. All right.

Secretary MCGUIRE. On the other part of your question, Mr. Congressman, the units that are on active duty, let's say, are in-being units. It would miss some of the mobilization factors, but would go through some of the later steps that would take place with the unit that you are mobilizing in the later days, such as the reevaluation of equipment that might be used to bring it into the top position.

Mr. VAN ZANDT. All right.

General BESSON. From this table of organization and equipment, we get the items that are authorized, the quantities, the weights, and cubage of the various items, the category. And here I have listed the the various categories under which we group our materiel. Also the movement requirements involved. In this case the original gathering together of the equipment at McCoy as well as the movement to Fort Hood and finally the movement to oversea area R. And also the time phasing.

Now with respect to equipment, the technical services determine what is necessary to bring the table of organization authorization up to strength. For example, if this is a Reserve unit, it has only training equipment—limited quantities. It may not be the type of equipment that it should take overseas. It is the job of the technical service to furnish to us in the Transportation Corps the specifics on what is required to give this unit the equipment which it should take overseas.

These specifics cover the items to fill the table of organization and equipment, to replace items of equipment which for one reason or another should be replaced. They give instructions on what to do with the equipment which the units would not take overseas that they have either for training purposes or because it would not be required in the area to which they are going or which would be replaced by more up-to-date equipment.

And, finally, the technical services give us information on the resupply items which automatically follow this unit, to arrive in the theater shortly after it arrives there, to support it, before the normal requisitioning processes are put into being.

From these requirement sources we get the items to be shipped, quantities, weight, and cube, category, origin, destinations, recipients, and the time phasing.

Mr. VAN ZANDT. General, at this point, as I see it there would be certain types of equipment that would represent an input and an output, we will say again, at Camp McCoy.

General BESSON. Yes, sir.

Mr. VAN ZANDT. In the first 30 days. And then knowing the destination of this unit upon completion of training, there would be a lot of equipment sent directly to the theater?

(General Besson nods.)

Mr. VAN ZANDT. That they would be part of.

General BESSON. That is right.

Mr. VAN ZANDT. And there they would receive that equipment; is that right?

General BESSON. Yes, sir; exactly. And it could be that when they go down to Camp Hood for their maneuver areas they might use equipment in the maneuver area.

Mr. VAN ZANDT. Yes.

General BESSON. So this plan covers all those various aspects. It might cover the utilization of equipment already prepositioned in the theater.

Mr. VAN ZANDT. Yes.

General BESSON. But it applies specifically to the unit and the details of exactly what equipment the unit has at the various stages that it goes through, before it finally arrives in the overseas area as a fighting unit.

Mr. COHELAN. General, I haven't a clear idea in my mind what "g" means—phasing. What do you mean by that?

General BESSON. By "phasing," I mean that in the first month you would move the equipment from the place—in the National Guard Armory where it may be, to Camp McCoy. In the sixth month you move it down to Camp Hood.

Mr. COHELAN. I see.

General BESSON. In summary, now, this is the way that the Army develops its requirements. The end result is giving to the Military Traffic Management Agency passenger movement requirements and freight movement requirements. In both instances, giving the area of origin, the destination, the phasing, and any special requirements that are unusual. These requirements are developed from the mobilization troop program, which feeds in directly; from information from the various technical services, who in turn are guided by the mobilization troop program; and such instructions as we may get from the overseas commanders.

I want to emphasize that what I have covered now is the planning procedure, on which we base our plans and make our studies, prior to implementation. When the balloon goes up and we are told to implement a certain aspect of the plan, we of course reevaluate it in the light of the circumstances at that moment, and we refurnish the Military Traffic Management Agency up-to-date information to cover the specific movements involved.

Mr. BECKER. Now, what about your transportation requirements in that particular event? When are the studies going to be completed for this particular plan that you have here, as to transportation requirements?

General BESSON. We have made our first cut—when I say "our first cut," our first study, covering the hypothetical cases that you saw on my first chart.

Mr. BECKER. Yes.

General BESSON. We have in detail other Army plans covering other specific movements—for example, the movement to Lebanon

was covered by a plan which we found when we started to implement it needed some bucking up. But we have a lot of plans. But those which have gone through the whole cycle, into getting into MTMA, are the ones which the Secretary outlined to you previously.

Mr. BECKER. And transportation facilities requirements are spelled out in these items?

General BESSON. We have spelled out the movement requirements.

Mr. BECKER. Yes.

General BESSON. The Military Traffic Management Agency tomorrow will delineate to you the specific transportation requirements required to support the movements.

Mr. BECKER. Thank you.

Secretary MCGUIRE. Mr. Becker, if I may. What we are trying to show you here I think is this: It is one thing to show requirements. The big question is where do they come from and how did you obtain the requirements. We are attempting with each service to show you the work that goes on behind, to generate these numbers called requirements, and make them intelligent to you, so you can understand them better.

General Morris will show you the interpretation of these specific tonnage requirements broken down as to hopper car, passenger car—as to the types of equipment—airplanes, dry ships, and so forth, as we go on.

Mr. COHELAN. General, short of the balloon situation, how frequently do you reevaluate your current plan, this program?

General BESSON. Well, for example, we have the Army strategic capabilities plan for each year, that is revised yearly.

The times that we redo these things depend upon the guidance that we get from the Joint Chiefs as to the jointly approved war plans, plus other contingency plans which are developed unilaterally within the Army.

Mr. COHELAN. But there is, then, more or less an annual review?

General BESSON. There is not only an annual review of the planning on this, but there is an annual testing of the implementation of the plan either by inspection visits where you go down to the units and say, "Assume that you had to implement us, bring out our movement plans, your movement loading schedules, and show you how many rail cars you need." And we check that back against the information we have.

Mr. COHELAN. Yes.

Secretary MCGUIRE. I might add further that this goes back to further than just a manual date review. As you get certain tensions developing they obviously will start to review those plans in anticipation. And in any planning of this nature, you must provide some broad basic type general assumptions. But as you get specific as to a point you can begin to concentrate things into that area.

Mr. VAN ZANDT. General——

General BESSON. Excuse me, sir.

Mr. VAN ZANDT. Go ahead.

General BESSON. Reinforcing what the Secretary said, for example, at the time of Lebanon we had plans which would have gone further if more troops were needed in that area. We had people in the field with the units, right going over the last minute—their requirements to move if they had to move, and working even further than that,

even working with the railroads and the truckers and the other associations in how we could get the equipment, under sort of hypothetical ideas.

Mr. VAN ZANDT. A moment ago you said, of course, the planning is reviewed from time to time. How frequently has the basic thinking been affected as a result of this revolution that is taking place in the field of weapon development?

Secretary MCGUIRE. I would like to answer that question, if I may.

I think to properly understand this we ought to go back to World War II and its concept. Over a period of time we were prone to think in terms of World War II—this having been the most recent large-scale military operation. Then, of course, we had Korea. We thought in terms of magnitude of that problem.

Well, as these weapons become realities or they become something over the horizon, that you could really see, rather than the Buck Rogers we were talking about, there has been a substantial reevaluation of this thing. I call it sort of facing up to the facts of life. It is fairly obvious that if we have an all-out general war we are not going to have the opportunity for that magnitude of mobilization, certainly if we have one that strikes at the moment. We will point this out to you.

So I would say in answer to your question that within the last 5 years there has been a substantial sharpening, if you will, in this planning—bring it down to a much more realistic basis. When I say realistic, I do not mean to imply that the previous basis was unrealistic. But as we have learned and can visualize this thing, and adjust it, this change has happened.

Now, this type of planning has brought about certain revisions in thinking. For example, first of all we believe that the most important priority we have is the readiness and the capability of our forces in being, our active forces. There is no sense in having somebody out there who is not equipped with the best we have. He must be able to certainly defend himself. He is the first line fellow.

Secondly, it brings about serious question as to whether or not a plant in the mobilization area, for example, which was going to come into being, let's say, 45 months after the time that a general war begins and produces its first item is really the place to put your money and to get your deterrent strength. I don't believe that the capability to make a tank 45 months after we are attacked is going to deter very many people from attacking us.

So we have put those types of projects in a very low priority, as a matter of fact wiped them out in many cases, and moved our financing, that is our emphasis, more on today's operation.

I don't mean to imply by this that we have completely solved all of the problems. This is a fairly gigantic task. But we are putting this in now and it is getting into the levels of the preplanning. When you see a military plan on logistics, it isn't something that somebody prepared yesterday. The pieces and the parts of this thing probably started 2 or 3 years ago, coming up through interim requirements. So there is a followthrough on this.

Incidentally, I can't resist this opportunity. This is also one of the reasons we have some excesses. Because the fact that we have that excess does not mean that it was wrong in the position we were planning for prior to this. This isn't the only reason we have them.

Some we get from mistakes. But as we develop these things we believe that we should get hold of these excesses and get them out of our inventories. And recognizing this is the best way to save money—and there is no sense in massaging them or taking care of them or dusting them if we are not really going to have a good chance of using them.

Now, I don't mean by that that we would discard assets that are potentially valuable. But as for holding on to assets on the philosophy, "Well, somehow, some day we might be able to use this," I don't think there is where we need to spend our money. We need to spend our money on what I call No. 1 priority first line equipment.

I am sorry if I got this involved.

Mr. VAN ZANDT. Thank you.

Mr. BECKER. May I ask a question?

Take, for example, a couple of years ago when you had the atomic cannon come into being. You had studies or plans of transportation for your equipment up to that time. You immediately then set in your plan the necessary facilities for making that cannon mobile. You do that immediately, do you not?

Secretary MCGUIRE. Yes, sir.

Mr. BECKER. In other words, when these new weapons come into being, or new equipment, the mode of transportation must be worked out and provided immediately for that program, would that be correct?

Secretary MCGUIRE. That is correct.

Mr. BECKER. So changes are taking place constantly with the changes in equipment, and——

Secretary MCGUIRE. Every decision you make on the introduction of a new weapon——

Mr. BECKER. It doesn't wait for a new study to come along at some presubscribed date, to phase that in.

Secretary MCGUIRE. That is correct.

Now, there are certain basic assumptions that one would make. And this is the point that I was addressing myself to before. They have an effect on all of these determinations. Which is a little different than the implementation under your guidelines of supplying the spare parts and the supports for that atomic cannon you are referring to. I don't profess to be a military expert on all of these.

Mr. VAN ZANDT. I had a continuation here in my questioning.

I want to refer now to General Besson.

This planning is now on a worldwide basis as far as we are concerned; is that correct?

General BESSON. I don't follow you.

Mr. VAN ZANDT. In other words, the transportation of people and needs for military purposes is not confined alone to the United States but it reaches out now to other parts of the world?

General BESSON. Yes, sir.

Mr. VAN ZANDT. All right. In connection with the Lebanon deal, what were your problems? And you had a few. I am thinking of getting your troops from Central Europe to the Middle East.

Mr. KILDAY. Before we get to that, may I inquire into this?

Mr. VAN ZANDT. Yes.

Mr. KILDAY. To see if it won't shed some light on the whole thing for us.

First of all, this is a constant review, isn't it? It is going on all of the time. And when you say that once a year you do it, that means that at that point, once a year, you come together and formulate the things that have been planned and replanned throughout the year and you formalize them as of that date.

General BESSON. That is correct, sir. And there is no special date for all plans, that you are working on various plans and they come to fruition at different times. But at some specific time you do stamp the 1959 plan "This is the 1959 plan," and at that point you start to work on the 1960 plan.

Mr. KILDAY. Now, we no longer have, I believe, a War Plans Division, do we, by name?

Secretary MCGUIRE. Not that I know of.

General BESSON. No, sir.

Mr. KILDAY. We always had the War Plans Division.

General BESSON. There is a Plans Division of the Army General Staff.

Mr. KILDAY. At one time the Chicago Tribune, or somebody, published, as if it were a secret, that they had just uncovered that planning for war was going on by the military. [Laughter.]

The warmongers, of the Military Establishment.

Mr. VAN ZANDT. Yes.

Mr. KILDAY. They published a great series of articles on it, and aroused the people something tremendous.

These plans: You attempt to figure out every area in which there could possibly be a disturbance that would require our participation or our movement to it, isn't that correct?

General BESSON. That is right, sir.

Mr. KILDAY. Now, let us take specifically the Lebanon thing. The way the people found out about it, of course, is the President of Lebanon complained about infiltration from Syria and the rebels were fighting through the city, and so on. Then one day the President called the Speaker and the leaders to the White House. They came back and in the papers found that troops were already on the way.

So as far as the public ever knew—and we here, for that matter—you then began to plan for something that might happen in Lebanon.

Did you have specifically a plan with reference to Lebanon, prior to the date that the President decided that he would send forces to Lebanon? Did you have a specific Lebanon plan or Mideast plan or——

General BESSON. Mr. Chairman, yes, the answer is "Yes," from where I sat or was. Now, whether there was a joint plan for that level I do not know. But translated down to my level, there was a specific plan to deploy Army troops to Lebanon.

Now, in addition to that, at the same time that we were implementing that plan we were developing expanded plans as to what we might have to do if we would have to go into the Gulf of Aqaba, where the Suez Canal would be barred from us. We were just generating plans faster than you could almost think, to cover what might grow out of that situation.

Mr. KILDAY. So that while it comes as sudden news to the public those whose responsibility it is have been working on this specific thing?

General BESSON. No question about it.

Mr. KILDAY. Maybe for years.

General BESSON. The adequacy of military planning is judged by the degree to which you are able to anticipate and preplan the requirements which are thrust upon you by circumstances.

Mr. KILDAY. Then you took out the Lebanon plan and you had to enlarge here and contract there, depending upon the extent to which I guess the political level decided that the program should be. Then you added or subtracted.

Secretary MCGUIRE. I think I might be helpful in this respect.

The planning, specific planning, and determinations and recommendations of the nature that you are talking about, of course, are made by the Joint Chiefs, themselves.

Now, it is obvious to me also that as a Nation we are not seeking to create a war. But sitting down and planning what you do if you had to go to war and are forced into that situation is only just ordinary precaution. There is nothing sinister about that. This just is ordinary commonsense. And as you see a tenseness develop in the situation—for example, I recall in the Lebanon thing we sort, more than sort of dusted off the situation we had in Suez. We had to call up tankers. This is just prudence. You look at the potential problem and see what you would have to do if the thing reached that state.

I might add that in the Lebanon operation we encompassed several problems. For example, if the Lebanon operation continued on for an extended period of time, what would you have to do to back it up?

Therefore, I think it is well known that when the troops were pulled out it didn't necessarily mean that some equipment wasn't in the process of being brought up in support. The troops weren't pulled out on a basis that was determined the day they went in, and the basis upon which you might be phasing in equipment to support them would be different from the circumstances which permitted their withdrawal.

So this kind of planning that you are talking about is taken care of. I think it is axiomatic that people in these positions must have this type of planning in the back of their minds at all times.

Mr. VAN ZANDT. Mr. Chairman, what I was trying to develop is exactly what Mr. Kilday has led into.

Now, in the implementation of that plan, were you stymied in any way by aircraft flying over countries, where we did not have permission, and so forth?

General BESSON. We had no problems that were not solved, sir.

If we had gone into an expansion of our activities, we might have had problems. We had problems. There was a problem, as I remember it, of overflying Greece.

Mr. VAN ZANDT. That is what I am coming to.

General BESSON. There was the problem of congestion at the airbase on the receiving end over there, in Turkey—Adana. But by and large, this operation was very smooth and very well done.

Mr. VAN ZANDT. Then these obstacles mentioned—really you have to anticipate them, in an emergency?

General BESSON. Yes. They had been anticipated to at least a reasonable degree, and they were overcome in time to not delay the implementation of the plan.

Mr. BECKER. Then we could take this as being one instance of a proper preplanning of necessary transportation of a project of the nature of Lebanon—the preplanning worked out on transportation about as satisfactory as you could expect, with certain obstacles that had to be overcome?

General BESSON. From where I stand, I would say that. I have no lashes on my back as a result of what went on. [Laughter.]

I am not sure whether the Army as a whole was completely satisfied with every aspect of it.

From where I sat, it was a very satisfactory operation.

Mr. VAN ZANDT. Well, Mr. Chairman—just off the record.

Mr. KILDAY. Off the record.

Mr. VAN ZANDT. Further statement off the record.

Secretary MCGUIRE. Mr. Van Zandt, I would like to speak off the record, with the permission of the Chair, if I may.

Mr. KILDAY. Off the record. Back on the record.

Mr. BREWSTER. Were any of the obstacles that you met in the Lebanon situation caused by interservice rivaltry?

General BESSON. Not that I know of. I witnessed a direct communications setup that the Army set up for the Chief of Naval Operations, for example. I must say to you that my experience—and bear in mind I am not in operations. I don't get—this is the service aspect.

But my experience in the field, in talking with the men—and I was in Taiwan last January, where we had a similar operation. The so-called interservice rivalry is not really a problem.

I mean these men are out there on a job and they work with one another. Their own lives are at stake in this thing, besides their professional pride.

Mr. KILDAY. Of course, they were pretty far from Washington.

General BESSON. Certainly from our standpoint, the cooperation that we got from the Transportation Agency of the Navy and the Air Force were all that could have been desired.

Mr. BREWSTER. That is what I wanted to hear. That is fine.

Mr. VAN ZANDT. Off the record, Mr. Secretary.

(Further statement off the record.)

Mr. BREWSTER. One further question, though.

Mr. Secretary, are the other services carrying on—I assume they are—similar planning which is coordinated with the Army plan?

Secretary MCGUIRE. I would like to amplify on that. We will have representatives of the other services cover this. They may present it to you in a slightly different fashion. We did not try to formalize a set pattern, but allowed them their own latitude to do this.

But all of this planning is done under the direction of the Joint Chiefs, and then in each individual service the Chief of Staff has the responsibility of assuring that his forces are ready and equipped. The general broad guidelines that cover the situation are issued by the Secretary of Defense, in consultation with the Chiefs.

This is not the easiest field to wander around in.

Mr. KILDAY. Mr. Cohelan.

Mr. COHELAN. Mr. Secretary, you took some pleasure, and rightly so, in pointing out the problem of excesses here, in an earlier observation, which caused me to wonder if this is given to measurement in terms of rates of obsolescence. Do you have any figures on that? Do you keep track of what the relationship is in terms of cost?

In other words, how much does it cost us from one period to another as a result of these changing plans?

Secretary McGuire. Well, I don't think it is so much the changing of plans, sir—if you mean that somebody one day decides to do this and the next day decides to do the other. You do this primarily with the same equipment.

The changing and obsolescence that I was referring to is related to improvements in weapons. For example, you have an F–86 aircraft being replaced by the F–105.

Mr. Cohelan. Yes.

Secretary McGuire. Obviously the F–86 aircraft is obsolete and is out of the inventory. This is the kind of excess I am referring to.

Mr. Cohelan. Yes. We are both talking about the same thing.

Secretary McGuire. Good.

Mr. Cohelan. I just want to know—I am thinking of it in some kind of a series term, of what the rate of change is.

Secretary McGuire. I don't have such details with me.

Mr. Cohelan. If it is a significant change because of the current rate of technological change.

Now you yourself have testified that things are coming pretty fast and furiously. I don't see how you can do it any other way, because of this factor, rate of change factor.

I am just wondering if it has given you some kind of measurement so we could see what the trends are from an economic point of view.

Secretary McGuire. I can supply that. We have not only made a detailed study of this, but we presented to several of the committees of the Congress our present appropriation bill. It recognizes this and the magnitude of the problem.

I think I could simply describe it at this moment—but we will amplify it, if you want us to.

Mr. Cohelan. No; it isn't necessary.

Secretary McGuire. If you are going to put about $19 billion into the defense inventory every year—and this is about what we are putting in—and you are procuring for what I call consumables, that is, petroleum, food, clothing, let's say in the amount of $5 billion, obviously you are going to have $14 billion coming into the inventory.

Now something has to come out of the other end or the inventory is going to keep going up.

Mr. Cohelan. Yes.

Secretary McGuire. If you then stop to consider that about 80 percent of our inventory on our method of bookkeeping is what I call used inventory. This does not imply that it is unsatisfactory inventory.

A good example is, when you buy a new car today at $3,000, you immediately start to depreciate it. Over a 5-year period you get rid of it.

Now a substantial amount of the equipment that we declare as excess, or some call surplus, is in fact like the automobile, wornout equipment from which the Government has gotten at least, but even more than their money's worth.

If it is an old truck that has been used more than its expected life, then we sell it. We can't depreciate, under Government terms of bookkeeping, and we must talk in terms of acquisition cost.

Mr. Cohelan. Right.

Secretary McGUIRE. And we have a program. I am rather proud of the fact that within the last 2 years we have become proficient—and I don't think "proficient" is the word, either, because we have a lot to learn about it—to the end we are beginning to identify the causes and types of excesses, where these things came from, whether they were used or new.

This turns up the stuff that was overbought and why it was overbought. We can't do this in specific detail, but we are learning.

The very fact that we have now been able to identify, that we have roughly about $8 billion a year coming at us, is not a criticism of the Department of Defense. It begins to show a knowledge of what is in this area.

Two or three years ago, we didn't know, by categories of items. We are now able to begin to determine this and be knowledgeable about it.

Mr. COHELAN. Thank you, Mr. Secretary.

Mr. KILDAY. Mr. Secretary, I think we better proceed with the presentation as you had planned it.

Secretary McGUIRE. Excuse me. Yes, sir.

Mr. KILDAY. I am sure that many of the questions will be anticipated by you as we go along.

General BESSON. That completes my presentation, Mr. Chairman.

Mr. BECKER. Mr. Chairman, may I just ask you one question? In the presentation, each one of the services is going to make a presentation of their transportation necessities?

Mr. KILDAY. That is as I understand it.

Mr. SANDWEG. The way they formulate them.

Mr. BECKER. Yes. Then is there to be at the end an overall unified need for transportation?

Secretary McGUIRE. Yes, sir.

Mr. SANDWEG. General Morris will interpret it in terms of hoppers, railroad cars of all kinds: passengers, coaches, and everything. He will break it down.

Mr. BECKER. Thank you.

STATEMENT OF CAPT. BAFFORD E. LEWELLEN, HEAD OF TRANSPORTATION BRANCH, CHIEF OF NAVAL OPERATIONS

Mr. KILDAY. Next we have Captain Lewellen of the Navy. Go ahead with your statement, Captain.

Captain LEWELLEN. Mr. Chairman and members of the committee, I am Capt. Bafford E. Lewellen, Head of the Transportation Branch in the Office of the Chief of Naval Operations. As a witness for the Navy Department, I will describe to you the manner in which Navy and Marine Corps domestic transportation requirements are developed and passed to the Military Traffic Management Agency.

Like the Army, the Navy computes its transportation requirements.

The mechanics of calculating Navy transportation requirements are performed in the Bureau of Naval Personnel for passengers and in the Bureau of Supplies and Accounts for freight.

The calculation of Marine Corps transportation requirements are performed by the Headquarters, Marine Corps Staff, chart No. 1.

This chart indicates the generation of Navy personnel transportation requirements and their flow to the Military Traffic Management Agency.

The Chief of Naval Personnel translates the foregoing into requirements for men. The source of personnel for the first 3 months of mobilization will be largely the Naval Reserve population.

The source of personnel after 3 months will be that portion of the civilian population who have been inducted and have been in training.

Knowing the numbers of people required for each activity, the location and employment of the activity, and the source of personnel, transportation requirements are calculated by the Bureau of Naval Personnel.

After cross-checking with the Office of the Chief of Naval Operations and the naval district commandants, the Bureau of Naval Personnel then passes these requirements to the Military Traffic Management Agency.

The following features of naval personnel transportation requirements are significant. They are computed on the basis of the individual; large organizational movements are not contemplated nor required. Movements will be largely by drafts having no unit or organizational character.

Specific personnel requirements are identified with specific personnel resources, from which the total transportation requirements are computed.

Naval stations are manned insofar as practicable by Reserve personnel residing within the same naval district.

Quotas of men for assignment to fleet activities will be furnished from the closest naval district whenever possible. Recall of personnel within a given geographical area for an assignment within the same or adjacent areas has a natural tendency to reduce personnel transportation requirements.

The procedure followed by the Chief, Bureau of Supplies and Accounts, in computing Navy transportation requirements for freight and mail is illustrated on this chart.

In addition to information obtained from these principal plans, the Bureau of Supplies and Accounts conducts further liaison with other commands and activities in order to obtain and correlate more refined data.

From the various Navy technical bureaus and the Navy material inventory managers within the United States are obtained planned estimates of specific advance base initial outfitting, resupply, and buildup requirements.

The fleet commanders and their subordinate type commands provide special lift requirements in support of planned ship deployments.

The Office of the Chief of Naval Operations provides detailed aircraft flying hour and vessel steaming hour programs, both of which directly affect the volume of support tonnage required.

The Bureau of Supplies and Accounts also utilizes other sources of data in the tabulation of transportation requirements; the principal ones being:

(*a*) The CNO publication of logistic reference data for specific support tonnage factors.

(*b*) Personnel distribution data.

(*c*) Transportation statistical data compiled from past experience.

A specific example of the procedures I have described is the manner in which general stores material transportation requirements are developed.

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Based upon the planned population data of Navy personnel, and using CNO approved consumption factors in measurement tons per man per month, the general stores office computes separately the general stores requirements for forces afloat, advance bases, outlying bases, and continental activities.

The Bureau of Supplies and Accounts then translates these supply requirements into transportation requirements. These requirements are divided into domestic transportation flow patterns through the application of experience factors and modified as necessary to correspond to oversea transportation patterns.

The requirements for transportation of general stores material are then combined with transportation requirements for other general freight.

The resultant requirements together with other domestic transportation requirements are passed to the Military Traffic Management Agency.

Marine Corps passenger and freight transportation requirements are computed within the Headquarters, Marine Corps Staff and are developed as indicated on this chart.

Personnel and cargo transportation requirements are computed by the application of logistics planning factors to the Marine Corps personnel and material requirements. The total requirements for commercial domestic transportation are then transmitted to the Military Traffic Management Agency.

In conclusion, I wish to emphasize that Navy planning is not static. Navy and Marine Corps plans are reviewed and modified to reflect changing strategic and tactical concepts.

The various detailed planning factors utilized in computations are revised as logistic concepts change and supply techniques are refined.

Obviously, transportation requirements cannot be forecast with certainty because the exact nature of a future war cannot be foretold.

They are, however, as carefully computed as the use of judgment and past experience will permit.

I would also like to emphasize that the Navy and Marine Corps levy transoceanic and overseas theater transportation requirements on both the Military Sea Transportation Service and the Military Air Transport Service for sea and airlift requirements in addition to those which are placed upon the Military Traffic Management Agency.

(Chart 1, Navy Personnel Transportation Requirements; chart 2, Navy Freight Transportation Requirements; and chart 3, Marine Corps Passenger and Freight Transportation Requirements, are as follows:)

CHART 1

NAVY PERSONNEL TRANSPORTATION REQUIREMENTS

(FLOW CHART)

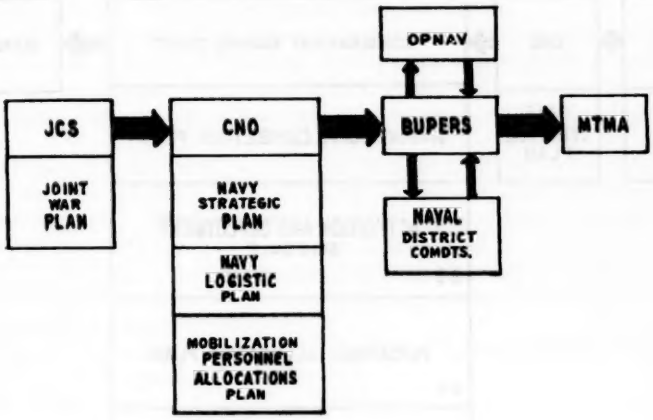


CHART 2

NAVY FREIGHT TRANSPORTATION REQUIREMENTS

(FLOW CHART)

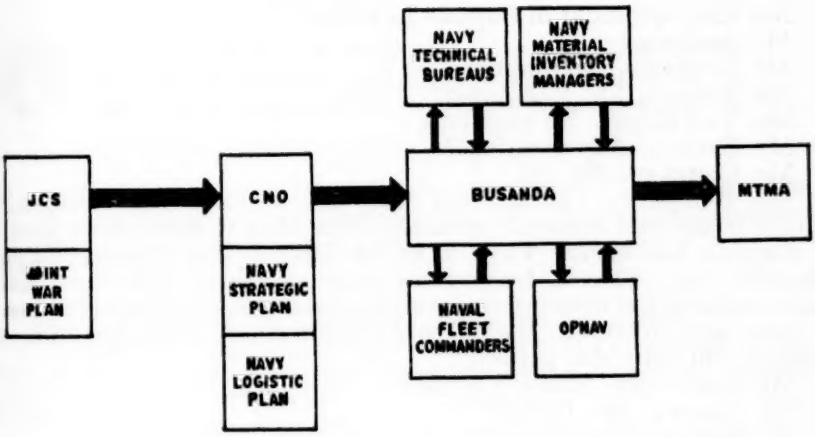
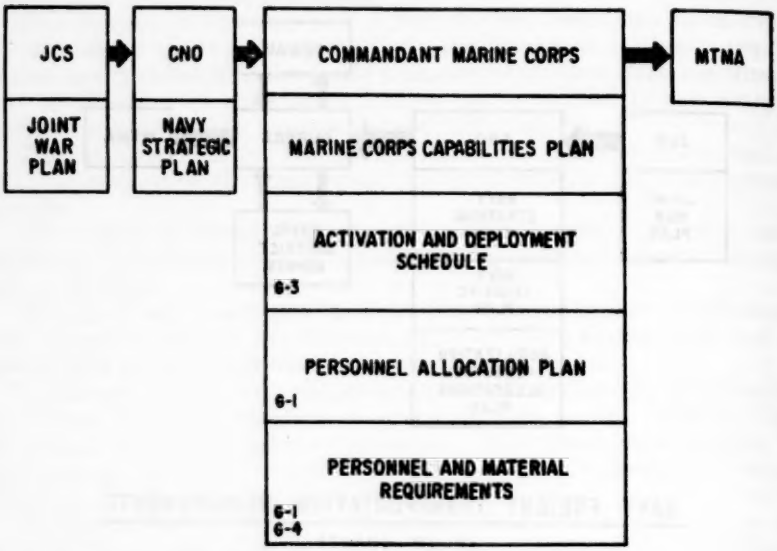


CHART 3

MARINE CORPS PASSENGER AND FREIGHT TRANSPORTATION REQUIREMENTS

(FLOW CHART)



Mr. KILDAY. Thank you, Captain Lewellen.

Are there questions of Captain Lewellen?

Mr. Sandweg?

Mr. SANDWEG. No questions.

Mr. KILDAY. Mr. Van Zandt?

Mr. VAN ZANDT. No questions.

Mr. KILDAY. Any questions?

Mr. COHELAN. No, sir.

Mr. BREWSTER. Captain, the Navy has to carry Army and Air Force troops and materiel, certainly, from time to time, don't they?

Captain LEWELLEN. They do in the Military Sea Transportation Service; yes. That is for oversea transportation. The Navy has no transportation responsibilities within the continental United States.

Secretary McGUIRE. We will cover that in detail, of the operation—how this fits into this pattern.

Mr. BREWSTER. Thank you, sir.

Mr. KILDAY. Mr. Becker?

Mr. BECKER. No questions.

Mr. KILDAY. Thank you, Captain Lewellen.

STATEMENT OF COL. EARL C. HEDLUND, ACTING DIRECTOR OF TRANSPORTATION, HEADQUARTERS, U.S. AIR FORCE

Secretary McGUIRE. Colonel Hedlund, of the Air Force, will describe the pattern of how the Air Force develops its requirements.

Mr. KILDAY. Come around, Colonel.

Colonel HEDLUND. Mr. Chairman and members of the subcommittee. I am Col. Earl C. Hedlund, Acting Director of Transportation, Headquarters, U.S. Air Force.

In this capacity I appreciate the opportunity of appearing before your subcommittee to present our views with regard to the adequacy of transportation support provided the Air Force.

The Air Force transportation system as a vital and dynamic element of our combat forces is designed to support the highest possible state of combat readiness with a minimum amount of resources. This system must remain flexible in order to support any type of emergency situation and must provide a constant environment of peacetime operational preparedness to meet limited or general war contingencies.

The Air Force uses all modes of transportation to support this dynamic system. With respect to airlift, it is considered pertinent to point out that the Air Force is both a user and provider of this mode of transportation. On the one hand we are the Department of Defense single manager for airlift services and at the same we are one of the airlift service's major customers.

A simple statement of the Air Force transportation mission is reflected on this chart:

(The chart referred to is as follows:)

CHART 1

THE AIR FORCE TRANSPORTATION MISSION

1. To provide world-wide mobility and flexibility of transportation support of combat forces in the most efficient and economical manner possible.

2. To insure that transportation systems complement present and future weapons employment.

Colonel HEDLUND. The Air Force transportation mission.

1. To provide worldwide mobility and flexibility of transportation support of combat forces in the most efficient and economical manner possible.

2. To insure that transportation systems complement present and future weapons employment.

Current logistic policies and concepts of the Air Force have substituted high-speed reaction for inventory—this means that we are no longer stockpiling large quantities of materiel and have reduced procurements accordingly.

Now, gentlemen, I would like to draw your attention to this chart which depicts Air Force transportation objectives.

(The chart referred to is as follows:)

CHART 2

AIR FORCE TRANSPORTATION

OBJECTIVES

1. DISTRIBUTION OF HI-VALUE ITEMS BY RAPID TRANSPORTATION FROM A CENTRAL STOCKAGE POINT TO THE CONSUMER ON AN "AS NEEDED" BASIS.

2. SATISFACTION OF UNPROGRAMMED OR EMERGENCY DEMANDS IN THE SHORTEST TIME POSSIBLE.

3. REDUCTION OF REPAIR CYCLE TIME ON ENGINES AND CRITICAL COMPONENTS WHICH MUST BE RETURNED TO THE CONTRACTOR OR DEPOT FOR OVERHAUL.

4. PROVISION FOR REGULAR AND DEPENDABLE SUPPORT FOR DOMESTIC AND DEPLOYED COMBAT FORCES.

5. REDUCTION IN TRANSPORTATION PIPELINE TIMES THUS REDUCING REQUIRED INVENTORIES AND DEPOT FACILITIES.

6. DISPERSAL OF WAR READINESS MATERIALS.

7. RAPID AND UNINTERRUPTED MOVEMENT OF AIR FORCE PERSONNEL TO AND FROM DUTY STATIONS TO MINIMIZE NON-PRODUCTIVE TRAVEL TIME.

8. MAXIMUM USE OF POL PIPELINE FACILITIES.

Colonel HEDLUND. Objectives:

1. Distribution of high-value items by rapid transportation from a central stockage point to the consumer on an "as needed" basis.
2. Satisfaction of unprogramed or emergency demands in the shortest time possible.
3. Reduction of repair cycle time on engines and critical components which must be returned to the contractor or depot for overhaul.
4. Provision for regular and dependable support for domestic and deployed combat forces.
5. Reduction in transportation pipeline times thus reducing required inventories and depot facilities.
6. Dispersal of war readiness materials.
7. Rapid and uninterrupted movement of Air Force personnel to and from duty stations to minimize nonproductive travel time.
8. Maximum use of petroleum pipeline facilities.

If our system is to operate effectively, we are completely dependent on high speed transportation, of which the primary mode is airlift.

Gentlemen, in planning for transportation support during emergencies we must recognize the condition of a sudden atomic attack on the United States with the attendant necessity for rapid reaction of our retaliatory forces and supporting logistics. In this situation, air transportation assumes the major role during the initial phase of military operations. Its use is planned in considerable detail, including preplanned loads of personnel and cargo; time-phasing of material and personnel into required locations; tailored teams of appropriately skilled personnel to perform desired tasks; transport aircraft required by types, and preplanned routes. Although Air Force wartime requirements for surface transportation are minimized by dispersal of war reserve material, the use of this capability is also included in our planning.

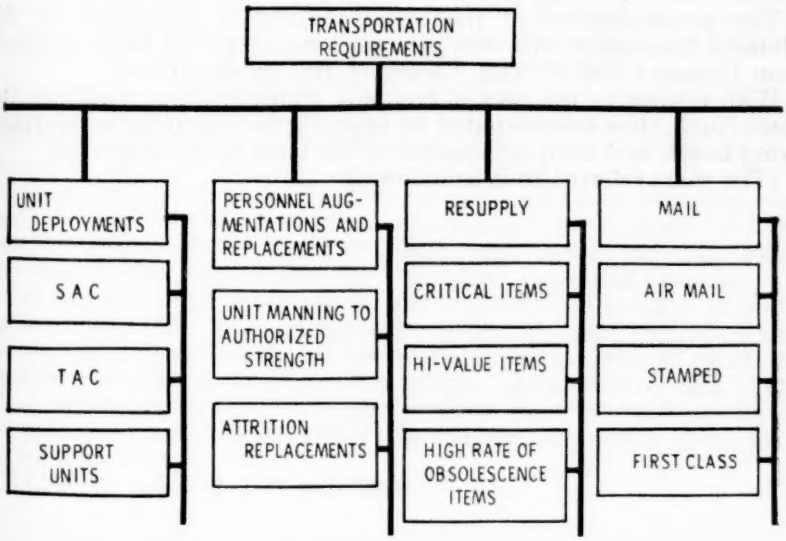
The basic Air Force concept envisions that the vital initial phase of future wars will be fought by trained in-being combat forces and that a general war posture must be maintained at all times. In this circumstance, domestic transportation requirements are essentially the same during the early stages of war as for peacetime. If there is a mobilization period prior to war transportation requirements would tend to increase in relationship to the buildup of forces.

And now, addressing myself to the subject of requirements and their determination—Air Force transportation requirements during mobilization and wartime periods are based upon the force structure approved by the Joint Chiefs of Staff. I would like to point out, gentlemen, that Air Force requirements are generated along the same general lines as shown by General Besson and Captain Lewellen. Consequently, to avoid unnecessary repetition I will confine myself to the basic policies which shape Air Force transportation requirements.

(Chart No. 3, Composition of Requirements, is as follows:)

CHART 3

Composition of Requirements

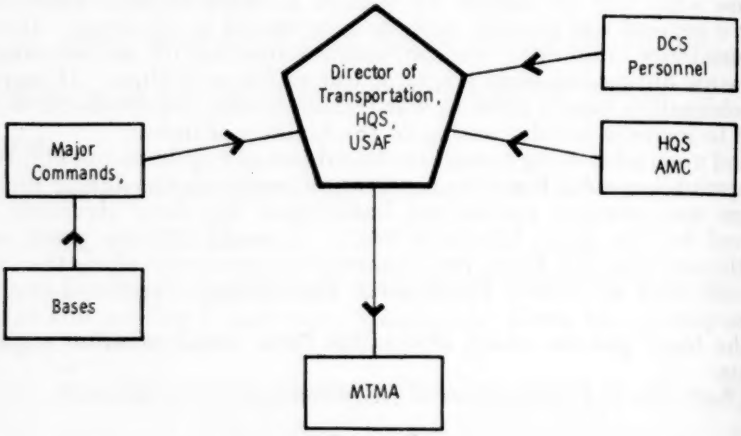


Colonel HEDLUND. The tonnages of equipment and numbers of personnel in the combat elements to be deployed are computed in detail by the operating commands in accordance with guidance provided by Headquarters USAF. In addition, personnel movements, resupply, and mail requirements must be computed. The flow of domestic transportation mobilization requirements to the Military Traffic Management Agency is as depicted on this chart.

(Chart No. 4, Flow of Mobilization Requirements, is as follows:)

FIGURE 4

FLOW OF MOBILIZATION REQUIREMENTS



Colonel HEDLUND. From the major commands on the left, Deputy Chief of Staff, Personnel, Headquarters, Air Materiel Command, which is our logistic agency on the right.

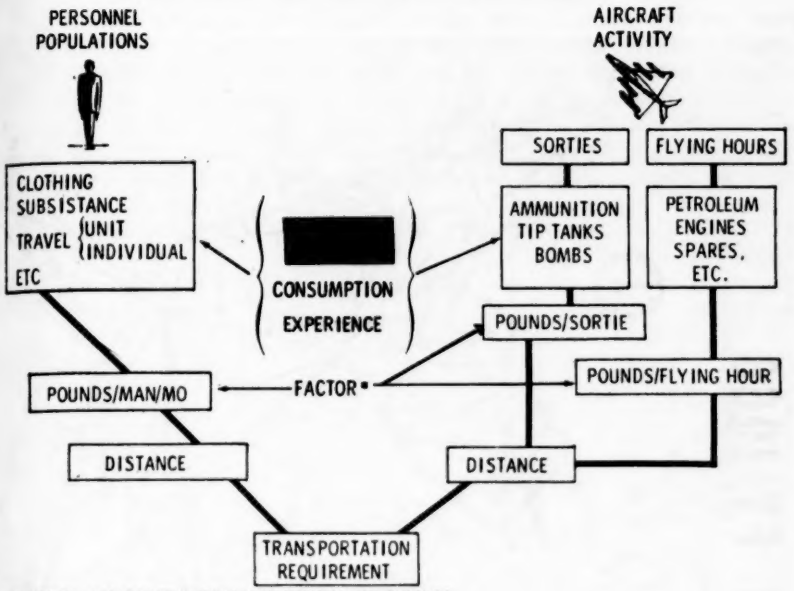
The preponderance of freight movements is generated by Air Materiel Command with the personnel requirements being supplied from Deputy Chief of Staff, Personnel, this headquarters.

With respect to the area of resupply transportation requirements, chart No. 5, they are computed by applying factors to the sortie rates, flying hours, and troop population of the force to be supported.

(The chart referred to is as follows:)

FIGURE 5

USE OF FACTORS IN DEVELOPING TRANSPORTATION REQUIREMENTS



* FACTORS ARE CONTINUOUSLY REVIEWED AND REFINED

Colonel HEDLUND. The requirements represented by application of the flying hour, sortie, and population factors are not duplicative. For instance, the sortie rate factor accounts for war consumables, such as ammunition, tip tanks, bombs, and similar items expended in proportion to sorties flown while the flying hour factor accounts for petroleum, engines, aircraft spares, and similar items consumed in direct proportion to the number of hours flown. The population factor accounts for such material as administrative and medical supplies, mail, and subsistence. The mode of transportation selected for movement of any item is dependent upon allowable transit time and availability of a particular mode of transportation.

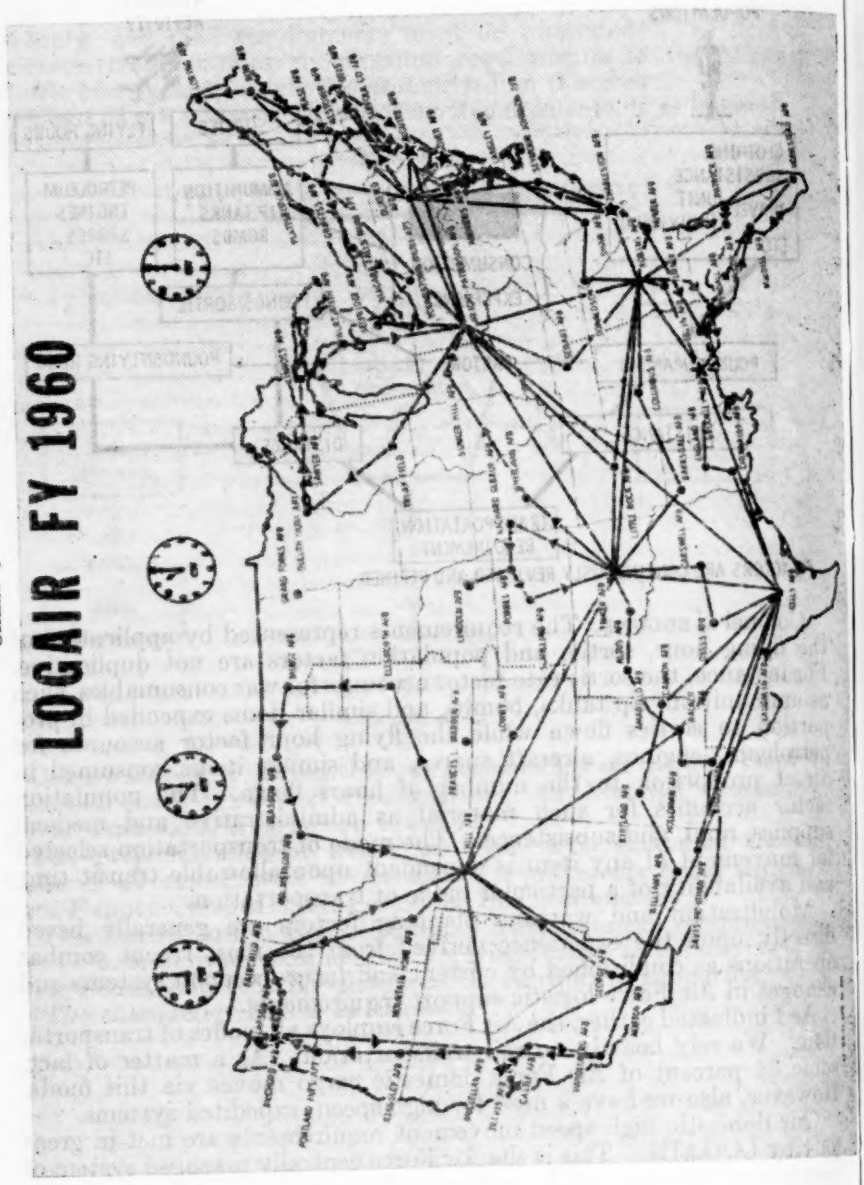
Mobilization and wartime planning factors are generally based directly upon the experience derived from the most recent combat operations as conditioned by current and future weapon systems and changes in Air Force logistic support requirements.

As I indicated earlier, the Air Force employs all modes of transportation. We rely heavily on rail transportation. As a matter of fact, some 34 percent of Air Force domestic cargo moves via this mode. However, also we have a need for high speed, expedited systems.

Our domestic high speed movement requirements are met in great part by LOGAIR. This is the Air Force centrally managed system of commercial contract airlift, operating daily over established routes to expedite the movement of priority cargo. As shown on this chart (chart 6), the system presently encompasses some 80 Air Force bases and provides combat units with daily delivery of priority items at a low ton-mile cost.

(The chart referred to is as follows:)

CHART 6



Colonel HEDLUND. Aircraft of the Military Air Transport Service, connecting with LOGAIR at the aerial port of embarkation, provide airlift to overseas areas, thus completing the global coverage.

Despite the importance of airlift to the total logistic system, only a small portion of our cargo tonnage actually moves by air. Therefore, we work continuously to increase the speed of distribution by other modes of transportation through expedited systems.

In areas of high density surface traffic in the United States the normal transportation services are complemented with LOGLAND. This chart, chart No. 7, will give you an idea of the route patterns covered by this service.

(The chart referred to is as follows:)

CHART 7

LOGLAND ROUTES

Colonel HEDLUND. This is a system which provides faster and more economical service by providing for collection of cargoes from a source complex, and movement by commercial trucking service to a variety of adjacent consignees.

To expedite the flow of material which because of the nature of the commodity must be moved by ship to overseas areas at a faster than normal pace, a LOGSEA service has been established. This service accelerates the flow of Air Force materiel by reducing port holding times at both ends of the trip. Control is similar to that exercised over airlift movement with delivery overseas being accomplished within 30 days.

It might be well to point out that the Army and Navy have also found a need for, and employ, expedited services.

All of these systems, designed to expedite peacetime flow of material, will be even more vital during war.

And now, gentlemen, to conclude, we are convinced that Air Force policies whereby the capabilities of all modes of transportation are

used in the role where each can best serve, with major reliance placed on airlift, assures the transportation support so vital to our combat forces in peace and war. Experience has shown that the competitive nature of domestic transportation has produced an effective system. We believe that the civil transportation industry will continue to progress and modernize so as to develop an even more effective capability to support our growing national economy as well as the military forces.

Mr. KILDAY. Thank you, Colonel Hedlund.

Now, as to LOGSEA, what ships do you use there?

Colonel HEDLUND. The ships that are used are those which are under the control and administration of MSTS, many of which, of course, are commercial carriers. The basic advantage of LOGSEA is that when MSTS selects the ship, which they do, they select that one which can most quickly accomplish the mission. And it may either be a MSTS ship or a commercial ship.

Mr. KILDAY. Then LOGSEA is actually handled, as far as the tonnage is concerned, by MSTS?

Colonel HEDLUND. Yes, sir.

Secretary MCGUIRE. I think I can verify this. This one kind of threw me, too, Mr. Chairman. I thought maybe the Air Force had a Navy. [Laughter.]

Secretary MCGUIRE. Actually, this is the Air Force's expression or code identification for expediting certain of their traffic via MSTS. MSTS and the ports have all of the information necessary to handle the shipments on an expedited basis in and out of the hold of the ship. MTMA designates how this traffic will get to the ports, and AF provides the necessary information to assure maximum speed of handling that has been arranged under the LOGSEA procedure.

Am I correct in this, Colonel?

Colonel HEDLUND. Yes, sir.

The main advantage in this system is in reducing port times. General Besson has the responsibility of handling all of our cargo through the ports. He is shooting for a system which will reduce port handling times for all cargo to the very minimum of degree.

Mr. KILDAY. It is a system of coordinating the surface lift?

Colonel HEDLUND. Yes, sir.

Mr. KILDAY. Out of the ports.

Secretary MCGUIRE. I think this is a means or a method, rather than encompassing as a system, in the terminology of system, a fleet of ships. They are utilizing our assets, but this is their means of keeping control of it, so they know where their equipment is and when it is arriving, and also to assure expeditious handling through the terminals.

Mr. KILDAY. It doesn't mean that LOGSEA is going to have a ship that it is operating out of port?

Colonel HEDLUND. No, sir; this is just a term to describe the system.

Mr. KILDAY. It is a term used for this type of handling?

Colonel HEDLUND. Yes, sir.

Mr. KILDAY. Questions for the Colonel?

Mr. VAN ZANDT. Mr. Chairman.

Mr. KILDAY. Mr. Van Zandt.

Mr. VAN ZANDT. Colonel, this is the only military transportation system that we have from the standpoint of air?

Colonel HEDLUND. Well, within the United States, which I was referring to here——

Mr. VAN ZANDT. Yes.

Colonel HEDLUND. We use this system, utilizing commercial contract carriers, which we call LOGAIR.

Mr. VAN ZANDT. Yes.

Colonel HEDLUND. This produces us expedited services for our "hi-value" and vitally needed spare parts to the bases of our combat units. Now, overseas our airlift is provided through the Military Air Transport Service, which General Tunner will being you up to date on during these hearings.

Mr. VAN ZANDT. Now, it has absorbed the responsibilities of the old fleet logistics wing; is that correct?

Can the Navy answer that?

Secretary MCGUIRE. Well, I think—I had better explain this this way. Maybe the Navy would like to amplify it, Mr. Congressman. The old fleet logistics air wing encompassed several missions. Now, a substantial part of this has been absorbed in what is known as MATS.

Mr. VAN ZANDT. MATS.

Secretary MCGUIRE. Some of it still remains with the fleets. This minimum part still remains with the Navy for specialized logistic support.

Now, the Navy also has within the United States a comparable operation to LOGAIR, called Quicktrans. This provides expedited service for special items and is so managed as to assure optimum aircraft utilization. This service is under contract with civilian airlines. Our policy in the United States is the utilization of civilian carriers including airlines to the maximum degree, which is practically all of it.

Overseas, as you know, we use MATS and we also contract for commercial augmentation of the MATS operation.

Mr. VAN ZANDT. Now, how is a decision made as to whether or not it should go by surface ship or by air?

Colonel HEDLUND. This decision is made within the Air Force by the Air Force, based upon two basic essentials: One is, we have geared our logistic system and our initial buy of spare parts in the area which we call "hi-value" items.

(Mr. Van Zandt nods.)

Colonel HEDLUND. To the movement by air. Thus we reduce our buy. When we move by air, we save dollars overall.

Mr. VAN ZANDT. Well, suppose that you received a request from the Army to move a certain amount of equipment abroad and it had to be there within a given time. Would the Air Force then make a decision as to whether it should go by surface craft or whether it should go by air?

Colonel HEDLUND. No, sir. The Army would make that, and perhaps it would be helpful if I explained the system a little bit.

Mr. VAN ZANDT. Go ahead.

Colonel HEDLUND. As to how we utilize our military airlift.

Mr. VAN ZANDT. Yes.

Colonel HEDLUND. Each of the three services forecast their need for airlift overseas, to each particular area. This is then built into an operating program by the Military Air Transport Service.

Then each of the three services, in accordance with the requirements which they forecast, determine how they will best utilize that lift.

Mr. VAN ZANDT. But they make the decision?

Colonel HEDLUND. Yes, sir.

Mr. VANDT. That is all, Mr. Chairman.

Mr. KILDAY. Are there other questions?

(No response.)

Mr. KILDAY. Mr. Sandweg.

Mr. SANDWEG. I am not quite clear, Colonel Hedlund, that your statement is—"LOGAIR is the centrally managed system of commercial contract airlift." Now, is it the Air Force decides that the movement by LOGAIR should go by air or is it MTMA that makes that decision?

Colonel HEDLUND. The basic decision with respect to the need for the type of service that is provided by LOGAIR was made some 5 years ago, when we were developing the high-speed logistics philosophy which I have just outlined. We then determined that in order to reduce our procurements and to provide the most effective service to our combat units within the United States, we needed this type of service. It was built into our system as a part of it. It is integral to our combat weapons system within the United States.

Therefore, it seems to us in the Air Force that it is just as essential to our continued operation as the weapons themselves.

Therefore, there is no traffic management evaluation insofar as the system is concerned, the system of Logair, that is necessary.

This decision has already been made when it was originally established.

Mr. SANDWEG. I thought that was the purpose of the DOD directive which established Military Traffic Management Agency, to solve those problems.

Now, before that time, it is my belief, or my recollection, that each of the services handled its own traffic management problems as it saw fit. At that time apparently Logair and perhaps Logland and Quicktrans were developed as systems of movement.

Now, from what I have read in the DOD directive—No. 5160.14—it is my understanding that the Military Traffic Management Agency was to be the central traffic manager for all movement of all services in the United States.

Colonel HEDLUND. I didn't complete my buildup here, from 5 years ago until the present time.

Mr. SANDWEG. Yes.

Colonel HEDLUND. I was trying to explain the basic reason why we established Logair and how now we consider it a part of our weapons system. Indeed, the Military Traffic Management Agency does have now the responsibility for an evaluation of the need for the type of service which Logair provides. They have accomplished this evaluation during the 2 years which they have been in existence.

Mr. SANDWEG. Well, then, let me ask this question. You are aware of the figures that General Morris will give us tomorrow?

Colonel HEDLUND. Yes, sir.

Mr. SANDWEG. When he speaks of there being a certain air capability that the Military Traffic Management Agency will be able to call on in its mobilization requirements is he going to therein include in the requirements the Logair movement, or is that going to be a part of the capabilities? In other words, are those true and exact figures, considering the movement of Logair and Logland and Quicktrans?

Colonel HEDLUND. I shall answer your question this way. The requirements for domestic airlift for the Air Force, which we submitted to MTMA, include the requirements which are currently and under wartime would be satisfied by the Logair operation.

The total capabilities which General Morris will speak about include the capability of the commercial aircraft which are currently serving our Logair operation.

We will insist in the Air Force that in the final allocation from OCDM and on down, that we must have this type of capability allotted to us, in order to best accomplish our mission.

Mr. SANDWEG. Does MTMA concur in that?

Colonel HEDLUND. We haven't gone through this phase yet of getting our allocation from OCDM and down through the Joint Chiefs of Staff. I say I am hoping they will.

Mr. SANDWEG. Yes.

Colonel HEDLUND. Because our system is so dependent upon it.

Mr. SANDWEG. Before I get to Mr. McGuire, may I ask you one other question? You said on page 5, "Despite the importance of airlift to the total logistic system, only a small portion of our cargo tonnage actually moves by air."

Since you gave a percentage on rail, can you give us a percentage on air?

Colonel HEDLUND. Yes. The percentage on air is 10 percent.

Mr. SANDWEG. Ten percent.

Colonel HEDLUND. Truck, 52 percent. Freight forwarders, 3.

Mr. SANDWEG. What I wanted to know was just the air. I am still not sure of how those figures are going to work. I have seen General Morris' presentation and I have gone over his figures. And since there is going to be a question about the availability of sufficient air cargo tonnage, and especially in view of the fact that that tonnage figure is computed on the addition to some of the passenger movement of cargo movement, which may or may not go to the same place at the same time, I think it is important that we know whether he is going to be able to depend on a certain amount or is some of that going to be preempted by Logair?

Colonel HEDLUND. Well, you understand that our requirements have been fed into MTMA and we hope that in the allocation back, as determined by the Joint Chiefs, that they will recognize our need for this type of service.

Mr. SANDWEG. Mr. McGuire, concerning this discussion, has there been any subsequent DOD directive that says that Logair is outside of the pale of MTMA, so far as traffic management decision? I have received the directives that were supplied on that and I wasn't aware whether any had been subsequently sent out or not.

Secretary MCGUIRE. Not that I can recall. Do you know of any?

Mr. DUNLEAVY. No, sir, not as a directive as such. But this requirements relationship has been resolved, because of this point that Colonel Hedlund has raised with respect to this being a priority thing within the weapons system.

Mr. SANDWEG. Is that the same with Quicktrans, Frank?

Secretary McGUIRE. In essence, it is the same situation.

Mr. DUNLEAVY. In essence, yes.

Secretary McGUIRE. I think the answer here is found by going back to the initial concept of the mission of Logair and its becoming an integral part of their missile system. The way they are now restricting their inventories in the Air Force, it is contended that Logair type service on selected priority classes of supply is mandatory, and I think the Air Force view has substantial merit.

Now, from a practical point of view and in an emergency, regardless of what anyone says today, if we get into a situation and we need Quicktrans or Logair, or anything else, the Joint Chiefs of Staff are the people responsible for fighting a war successfully—they can and will determine, as circumstances dictate, as a matter of priority how the capability of Logair and Quicktrans will be employed. I am sure the Air Force would be the first to acknowledge this point.

Colonel HEDLUND. Yes, sir.

Secretary McGUIRE. From a planning point of view, however, they have said in order to prompt logistic support and keep our inventory concentrated and reduced in this one area, they need this type of capability. I really don't think this is inconsistent to the directive at all.

Mr. SANDWEG. It looks to me, though, from this standpoint, that you have one arm of the military making a decision based on its own needs and its viewpoint——

Secretary McGUIRE. No.

Mr. SANDWEG. Whereas you have General Morris who is supposed to be the overall traffic director, who knows all of the problems——

Secretary McGUIRE. Well——

Mr. SANDWEG. Being told that that is the way it is going to be.

Secretary McGUIRE. Bear in mind that General Morris gets this requirement from the Air Force.

Mr. SANDWEG. Yes.

Secretary McGUIRE. He then applies to them, to the degree he can, into the available traffic.

Mr. SANDWEG. That is right.

Secretary McGUIRE. Now, if he has earmarked over here a segment for a specialized purpose, such as an engine program, or force support, he still has this guidance upon which to rely.

Mr. SANDWEG. Yes.

Secretary McGUIRE. And his judgment of the traffic management factors will be guided by changes in concepts or priorities directed by the Chiefs in accomplishing their mission.

I don't know—I have never discussed this specific point with General Morris—whether he would agree with me or not. But this is the way I would visualize it happening—would you, General?

General BESSON. That is correct.

Colonel HEDLUND. I think it should be made clear that General Morris as Executive Director of the Military Traffic Management Agency, has approved our Logair program for the current fiscal year.

Admiral LONG. It is the same with Quicktrans. We justify our requirements to MTMA for our Quicktrans. He passes on it and then we go to MATS for a contract for Quicktrans.

Mr. SANDWEG. For the purpose of the record, Admiral, could you identify for the reporter?

Admiral LONG. Admiral Long, Assistant Chief for Transportation, BUSANDA.

Mr. SANDWEG. I have one more question, Mr. McGuire.

You mentioned that you recently instituted, or initiated, a program for transportation planning. Could you give me a date on that, or an approximate date?

Secretary MCGUIRE. Yes. Back in December we instituted a new approach to our transportation planning. We had planning. I don't mean to imply we hadn't.

But we wanted to be sure that we brought this thing up to date and took into account all of the latest philosophies and calculations. And we wanted to be sure of one other thing. We wanted to be sure that in making a study of transportation we didn't make it by segments.

Now, it is one thing to make a study of rail transportation and come up with one assumption that you need so much rail transportation. To my way of thinking, in our position, we are required to evaluate the total overall assets or capabilities of the United States in transportation. So we directed the chiefs to go into this study and to make it under these different assumptions, and tie all three of them together.

In other words, it is conceivable that I could make a study and come up with a shortage—I don't know, any kind of a piece of transportation you want. I could have a shortage, if you will, of Pullman cars. But that doesn't mean to accommodate my mission I couldn't put somebody in a coach car.

If we are at war, and we don't necessarily have to travel by one means or another as long as we get there on time. We would like to have the best.

We are trying to get a composite picture that shows all of these evaluations. This new program was initiated originally in December of last year. There have been several other aspects since, tying every transportation aspect together. I believe that we will come up with this new information very early this fall. I am told it is the first overall comprehensive determination of transportation requirements that has been attempted. I don t think it will be perfect, by any manner of means. But our techniques and our knowledge in this field is becoming very advanced, compared to where we were 3 or 4 years ago.

I would rather let some of the military people who are around here evaluate the comparisons of the past.

Mr. SANDWEG. I have one question for General Besson, where he was talking about oversea command evacuation plans. There was some question about whether the military or civilian officials were to handle evacuation of civilians. No decision made on that yet?

General BESSON. That is correct.

Mr. SANDWEG. What is being done on that, in that field?

General BESSON. JCS is analyzing that and will take it up with the appropriate civilian authorities.

Mr. SANDWEG. Have you any idea when that might be finalized?

General MORRIS. No, I don't think he can state.

Mr. SANDWEG. You don't know when it will be done?

General MORRIS. I checked on that point this morning, and it just can't be answered at this time.

Mr. SANDWEG. That is all I have, Mr. Chairman.

Mr. KILDAY. Mr. Becker.

Mr. BECKER. Mr. Chairman, referring to Colonel Hedlund's statement—it is the first one of the three services that have come up with specific percentages of types of transportation necessary to move. I presume these figures you give, of—34 percent of Air Force domestic cargo moves via rail. On page 5. This I presume is a requirement; is that correct?

Colonel HEDLUND. This is a current experience figure, sir.

Mr. BECKER. It is a current experience figure. Is this based upon the necessarily mobilization of war on the planning that was depicted earlier?

Colonel HEDLUND. No, sir. In placing our requirement on MTMA, under the mobilization and the other concepts which have been outlined, we identified the air traffic and we gave our preference on the other traffic, that we left to the discretion of MTMA, in conjunction with all of the other workloads that had to be accomplished, a certain amount of free play in determining mode.

Mr. BECKER. So there is no relationship between your statement and the availability of transportation for what we will call an all-out war, that is domestic attack?

Colonel HEDLUND. It is very difficult to relate it to what may be available, that is true.

Mr. BECKER. Well, it has to be, if we are going to work out what transportation will be available in the event we do have such a situation.

Colonel HEDLUND. I say within the Air Force it is difficult. But this is the purpose of bringing all of our DOD requirements into focus in MTMA, so they can assess them in relationship to the capability.

Secretary MCGUIRE. Mr. Congressman, the figure he was quoting there is the Air Force current usage of rail service. The other services can give you comparable figures. I told you, Mr. Chairman, that we had the services give their own version of how they put these things together. It is their current usage, how the pattern falls.

Now, I think it is also proper to state that all of us have a concern to be sure that as we utilize our assets in peacetime there must be a relationship to what we expect to utilize in wartime.

Stating it very simply, one could say, "I would like to fly everything by air," or one could say, "I would like to send everything by bus," or some other method. Well, this does not really support a basic requirement from a mobilization point of view.

So we are getting in this field from the Joint Chiefs of Staff, as a result of the study we are developing, a position where we can say, "If it is going to be a requirement for war of specific percentages by mode to operate or procure for emergency support, then we are going to require a reasonable relationship to such percentages in our utilization of each mode in peacetime."

This may well run contradictory to a philosophy of buying transportation on the cheapest basis. I don't know whether this contradiction will hold true or not; however the answers will come out. I am sure you can appreciate that if we have to have X number of tons of lift capability required for war by air, sea, or land, however it falls, we may have to be called upon to match that to a reasonable degree on a peacetime basis.

Mr. BECKER. The point I am getting at here—pardon me, General.

General MORRIS. Maybe I can answer your question, Mr. Congressman.

Tomorrow I will show you the capability of the various primary modes, national; and against that the requirements of the military services, by mode; and additionally I will show you what they used via these modes during the calendar year 1958. So you can see what the trend now is and during war.

Secretary MCGUIRE. We also will show you the trends of these usages over a period of years, compared with the trends in national commercial usage of these different modes of transportation.

Mr. BECKER. Thanks very much, Mr. Secretary and General. That sort of brings to a head what I am trying to get at here.

Secretary MCGUIRE. Good.

Mr. BECKER. I will wait until tomorrow.

Mr. KILDAY. Mr. Brewster.

Mr. BREWSTER. Mr. Secretary, in the event of general war, what agency actually allocates priorities for shipment overseas of personnel and material of the various services; and by what means?

Secretary MCGUIRE. Well, the office of OCDM has the overall responsibility of wartime transportation controls. We will show you tomorrow the flow of our requirements, which we have covered today, as between the DOD and OCDM. Mr. Chairman, I want to compliment your committee on being patient with us while we walked through this. It is somewhat tedious and repetitive. But I have believed it to be better for this committee to thoroughly understand our requirements and planning development processes.

Mr. VAN ZANDT. It has been educational.

Secretary MCGUIRE. Then we will show you how our requirements go to OCDM. They cut the pie of all claimants as against the national capability. Then it comes back.

Now, I would like to point out two things to you. An obvious question: Well, what if you don't get enough to do what you are going to do? Well, the Secretary of Defense has a responsibility, and he can appeal OCDM decisions. I presume, if he is not satisfied with their decisions, he can go directly to the President on this matter.

Secondly, I would like to point out that we have capability of our own in the transportation field which we will cover tomorrow.

1. We have ocean capability in the MSTS.
2. We have airlift capability in MATS.
3. We have the CRAF program, which is the mobilization of civilian air capability to augment MATS.

Have I answered your question?

Mr. BREWSTER. Thank you, sir.

Mr. COHELAN. Mr. Chairman.

Mr. KILDAY. Mr. Cohelan.

Mr. COHELAN. Colonel Hedlund, I am interested in whether the Air Force has taken into account the problem of civilian air traffic in a mobilization situation. They expect to have—that is to say—civilian air traffic, while we are doing all this other stuff.

Colonel HEDLUND. Well, I suspect it will depend upon the circumstances which you are faced with insofar as attack within the United States is concerned. If you are not under attack, then no particular problem. If you are under attack, there is still a problem associated

with the activities of commercial aircraft—whether they are serving our purpose or somebody else, because of identification. This is an area which is being very closely scrutinized now by the military in conjunction with Mr. Quesada and FAA.

Mr. COHELAN. This is my question. Allowing for the variation here in possibilities and speculations involved in this question, what plans have you made for air traffic control?

Colonel HEDLUND. Well, air traffic control within the United States is still a responsibility of the Federal Aviation Agency, in peace or war, insofar as I know, at least.

Mr. COHELAN. You have all these plans and there is all kinds of stuff going on——

Secretary McGUIRE. Mr. Congressman, I am not sure anybody in this room is qualified to answer your question. I certainly am not. This is not our field. (Addressing Colonel Hedlund): How do you feel about it?

My point is not to mislead Congressman Cohelan.

Mr. COHELAN. I think the entire thing is a guessing game, Mr. Secretary. We are making plans.

Secretary McGUIRE. Yes.

Mr. COHELAN. Now, all I am suggesting is: Do we have a plan for a contingency. This is a reasonable assumption. Now, you have been making assumptions all afternoon.

Secretary McGUIRE. I am not evading that question, sir. What I am saying is the particular phase you are concerned over is an operational phase that I personally would not be able to answer.

Mr. COHELAN. I am not quarreling——

Secretary McGUIRE. I will be glad to get the answer.

Mr. COHELAN. I am not questioning the details because I am not competent in that area. I am just a civilian here and I am asking a question that disturbs me. All I have is experience to go on. In the last war we had civilian traffic. And apparently there was a plan to allow for that.

Colonel HEDLUND. Let me assure you, sir, that there are very specific plans with respect to our air defense alert procedures which are very clear in what all air traffic does. I am not in a position to go into it because I am not that conversant with it.

Mr. COHELAN. Yes. But I would hope that we are doing some thinking about it.

Colonel HEDLUND. That is very true.

Secretary MGUIRE. I am sure of that. For example, right now I happen to know that Mr. Quesada has extensive plans in this whole traffic control area. And I am quite sure that there are plans available as to who takes over and who runs this thing.

Mr. COHELAN. Right.

Secretary McGUIRE. I am quite sure of that.

Mr. KILDAY. Isn't it a fact that under the Federal Aviation Agency that in time of peace they are both military and civilian?

Secretary McGUIRE. Yes.

Mr. KILDAY. And they see to it—they act as sort of a traffic cop for all of the airplanes to use the available airspace. In time of war, under existing law, FAA would be incorporated into the military and they would continue to act as traffic policeman on the using of the

air space. So everyone who has to fly will fly and they will fly in accordance with established priorities.

Now, we had a witness the other day from FAA. What was his name, I have forgotten?

Mr. SANDWEG. Mr. Bretsch.

Mr. KILDAY. General Quesada, or Mr. Pyle, his deputy, are the people in the spot to answer those questions. They would have control of all airlanes as they now have, but would operate even as a part of the military immediately upon the declaration of war or of national emergency by the President.

Mr. COHELAN. This plan will be part of the overall plan?

Colonel HEDLUND. That is right. It is essentially a part of our air defense plan. And there are several gradations of alert, depending upon the circumstances. And each one causes a different reaction of the various aircraft on the ground and in the air.

Mr. KILDAY. It could be that at times no civilian would fly. It could be that only the civilian who is needed to implement the war effort would fly. Or it could be that you could fly if you could get a reservation, just as not.

Mr. COHELAN. Thank you.

Mr. KILDAY. May I inquire, Colonel Hedlund. Now, before logair—take the B–52 for instance. Of course it is assigned to a SAC outfit somewhere in the United States. And I, take it that they would have at their own base certain parts to keep—I am talking about logair—their planes in the air. Certain other categories, or higher echelon of repair, or what not, would have been at an air materiel or AMC base.

Now, since logair, all B–52 repair or replacement parts, are at one Air Materiel Command Depot and would be flown from that by logair to the using point; is that correct?

Colonel HEDLUND. Not all of the parts which are utilized on any weapons system are in one air material area or depot. But the major systems are concentrated in a single depot. For instance——

Mr. KILDAY. So it is not necessary to have them scattered around in portions of the system?

Colonel HEDLUND. That is correct. Take at Rome, N.Y., for instance, which is a major electronics system center, where they concentrate on that type of equipment.

Mr. KILDAY. Engines and so on and so on.

Colonel HEDLUND. You have several engines. Again, depending on type. It so happens that the B–52 type are at Oklahoma City.

Mr. KILDAY. Now, has the experience shown that that requires a smaller inventory?

Colonel HEDLUND. Yes, sir.

Mr. KILDAY. Materially smaller?

Colonel HEDLUND. Yes, sir.

Mr. KILDAY. Now, Mr. McGuire, you had long and successful experience in retail merchandising. Has the use of air transportation had a major effect upon retail merchandising of the warehousing of stocks, and so on, at an individual store, and so on?

Secretary MCGUIRE. Well, there are two schools of thought on that, Mr. Chairman. It has been used.

I know personally in our own business we did not use it except on very certain types of merchandise. We would use it on millinery, for

example. It is lightweight. It is perishable—by perishable, I am talking about life expectancy. The life of a hat is about 4 weeks. If you don't sell it in 4 weeks you better throw it away. And particularly if it is getting closer to Easter.

Particularly it was in relationship to eastern markets where we needed it very quickly. Some of our problems, which also dictated use of air, resulted from the manufacturer being delinquent in living up to his delivery schedule, or our buyers being slow in getting on the ball. So we used to scrutinize these activities pretty carefully.

We made the same use of express as air. We also used other modes depending upon our marketing requirements.

On the other hand, I would like to point out to you that in our Cleveland operation, for example, and also in Boston when I was there—we had our own consolidated car, that left New York every night. In the case of Cleveland it was a consolidated car for various merchants, and as I recall this was 2-day service out of New York. Out of Boston we had our own trucks on the road. We used trucks there. We later put them on piggyback, because we got overnight delivery.

So I don't think any one store that I know of has made a practice of using one or the other service. It depends on what fits into the condition and the requirement.

Mr. KILDAY. Of course, as airfreight develops and expands you feel that there will be——

Secretary MCGUIRE. This is one of the problems. We were watching the pennies in the retail business, and this had a great effect on it.

I would point out to you, however, that in the ready-to-wear business in the west coast there was a much more substantial use of airfreight, where you could take dresses out of New York, let's say at 7 o'clock at night. This service provided next morning delivery on the west coast. They could afford this service because on the west coast they enjoyed a greater markup, and therefore more profits than we did.

Mr. VAN ZANDT. Mr. Chairman, at this point——

Secretary MCGUIRE. This is a little off the military phase of it.

Mr. COHELAN. I will have to check, that Mr. Secretary.

Mr. KILDAY. It just occurs to me that this logair is probably a forerunner of what is going to become pretty general in merchandising—maybe not of your heavier, bulky things.

Secretary MCGUIRE. If you will just allow me to speak as a layman on this? And I think that is where your questions are directed.

I don't think you have to do more than stand in an air terminal, where commercial freight is passing, and notice the kind of things that are going by air. There are emergency shipments. There are shipments which are light enough in weight. Always, of course, the proper sales turnover potential is important.

Drugs represent another item, for example, which is susceptible to air service. You can concentrate this type of item in fewer depots.

Now, I know the airlines can prove this service out to you very precisely in selling it. It is not expected that everybody would buy it. The speed factor is there already and as the price comes down with these bigger and more economical planes, I believe you are going to find developing a greater commercial usage of airfreight service.

Colonel HEDLUND. Sir, could I give you an example of what we are trying to do here to be specific, in this area?

Mr. KILDAY. Go ahead.

Colonel HEDLUND. One particular item, pump assembly, costing $1,377 each, which is used on the G–100 fighters. With this pipeline we have been speaking of, we buy 2,260 items. We figure if we didn't move at high speed, we would have to buy 4,553 items. Multiplying this out, this is a reduction of $178,000.

Now this is just one little accessory. And this is the type of thing we are trying to promote.

Mr. VAN ZANDT. Mr. Chairman.

Mr. KILDAY. Mr. Van Zandt.

Mr. VAN ZANDT. Colonel, does this Logair—you say it is established and operates regularly. Does it move on a daily time basis?

Colonel HEDLUND. Yes, sir, it moves on a pretty regular table.

Mr. VAN ZANDT. Such as your airlines?

Colonel HEDLUND. Timetable basis, yes, sir.

Mr. VAN ZANDT. Now this question may be off the record.

(Discussion off the record.)

Mr. VAN ZANDT. That is all. Thank you.

Mr. BECKER. Mr. Chairman, you asked a question of Colonel Hedlund about the use of commercial aircraft. That will come all under the CRAF program—doesn't it, the use of commercial aircraft?

Colonel HEDLUND. If we are speaking about the use of commercial airlift to augment our Military Air Transport Service.

Mr. BECKER. Yes.

Colonel HEDLUND. Which is our overseas airlift.

Mr. BECKER. Yes.

Colonel HEDLUND. Yes, the CRAF program does augment them in time of war and will be discussed in some detail by General Tunner.

Mr. BECKER. That is right.

Colonel HEDLUND. In his presentation.

Mr. BECKER. That is overseas, you say?

Colonel HEDLUND. Yes, sir.

Mr. BECKER. What about domestic?

Colonel HEDLUND. Well, domestic is——

General MORRIS. I cover that.

Mr. BECKER. We have that tack here.

Colonel HEDLUND. Domestic is what we are talking about today. I have explained our need in the Air Force for the continuation of a type of service such as we have in Logair.

Mr. BECKER. Thank you.

Colonel HEDLUND. It will be covered by General Morris.

Mr. BECKER. Fine.

Mr. KILDAY. Mr. Brewster?

Mr. BREWSTER. Colonel, does Logair utilize commercial airlines or are they entirely your own planes?

Colonel HEDLUND. They are commercial aircraft, all of them.

Mr. BREWSTER. And you don't use any of your military aircraft for transportation purposes within the continental United States?

Colonel HEDLUND. Not in this particular operation. We use our military airplanes for transportation within the United States on essentially two bases. One, the outsized items which we can't haul by available commercial aircraft. And here I am speaking essentially of the missiles, of course, which I have spoken of earlier, which must travel across country for test purposes and so forth. I am talking

also of some of our engines, which are not adaptable to the type of aircraft in the Logair operation nor to the type of aircraft in the civil inventory.

Second, from time to time we do transport some cargo in military aircraft within the United States for security purposes, but this is very minimal.

Mr. BREWSTER. What about personnel?

Colonel HEDLUND. Personnel? We do no transportation within the United States as a matter of practice on official business. We have no MATS schedules within the United States, for instance, other than air evacuation. Our basic policy is to use commercial transportation for personnel movements within the United States to the maximum possible extent.

Mr. BREWSTER. Thank you.

Mr. KILDAY. Further questions?

(No response.)

Mr. KILDAY. Thank you, gentlemen. We will meet tomorrow at 10 o'clock.

(Whereupon, at 4:05 p.m., the subcommittee adjourned to reconvene at 10 a.m., Thursday, July 23, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

THURSDAY, JULY 23, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

EXECUTIVE SESSION

The subcommittee met at 10 a.m., the Honorable Paul J. Kilday, chairman of the subcommittee, presiding.

Mr. KILDAY. The committee will be in order.

We will resume our hearings this morning. We have with us this morning Maj. Gen. I. Sewell Morris, Executive Director of the Military Traffic Management Agency.

STATEMENT OF MAJ. GEN. I. SEWELL MORRIS, U.S. ARMY, EXECUTIVE DIRECTOR, MILITARY TRAFFIC MANAGEMENT AGENCY

General MORRIS. Mr. Chairman and members of this subcommittee, my name is I. Sewell Morris, Major General, U.S. Army. I am Executive Director of the Military Traffic Management Agency. I am here at the invitation of the subcommittee to offer a statement for the Department of Defense in connection with your inquiry into the adequacy of transportation systems in support of the national defense effort in the event of mobilization.

I have prepared a statement and with your permission, I shall present it.

Within the Department of Defense, the Military Traffic Management Agency, normally referred to as "MTMA," is the single manager operating agency established by the Department of Defense pursuant to Department of Defense Directive No. 5160.14, dated May 1, 1956. The overall mission of MTMA, briefly stated, is to "* * * direct and control all assigned functions of traffic management for all military departments." Specifically, this mission is further subdivided into two general areas as shown (chart 1).

1. To direct and control the procurement and use of commercial transportation service in the continental United States; and

2. To develop emergency plans for:

(*a*) The use, control and operation of military-owned domestic surface transportation resources required to supplement the capability of the commercial transportation system; and

(*b*) The use of commercial transportation resources and facilities made available to support military missions.

Except in emergencies when commercial transportation is inadequate, it is the policy of DOD that military transportation equipment will not be used for line-haul movements within the continental United

States. In accord with Department of Defense policy, we will not procure transportation in a manner which adversely affects the economic well-being of the commercial transportation industry. Because of the reliance during periods of mobilization or war on all modes of transportation, preferential consideration will not be accorded one mode as against another in the routine procurement of transportation during peacetime. Reliance upon the commercial transportation industry of this country is the fundamental base upon which MTMA has been established. I am charged with the responsibility of providing for an efficient and economical use of the commercial transportation resources utilized by the military within the United States in support of all types of military missions.

In response to this planning responsibility, MTMA, in coordination with the military services, has developed military requirements for freight and passenger transportation under certain hypothetical sets of conditions of mobilization and war. These requirements were submitted by the military services directly to MTMA.

Concurrently with the development of the hypothetical military requirements as discussed, MTMA assisted in the development of an assessment of the current capability of the principal domestic commercial transportation modes. I use the term "domestic" throughout my statement to include movement of military traffic within the United States, regardless of its ultimate destination.

COMMERCIAL TRANSPORT DATA SOURCES

In the development of this national commercial transportation capability, MTMA worked in close coordination with the respective industry and governmental sources shown on chart 2. Data on which the capability assessment by mode was developed were furnished and validated by these sources. Because these sources are vitally interested in what is to be expected of the modes with which they are concerned in terms of military requirements in time of emergency, steps are being taken to inform them of data pertinent to their respective modes as contained in these studies and to update information provided to them as additional studies are made.

It is recognized that the development of a total national requirement and a total national transportation commercial capability is the responsibility of the Office of Civil and Defense Mobilization. However, MTMA determined that to present military requirements unrelated to a national capability would be practically meaningless and would not contribute to valid analysis of the adequacy of our transportation systems. It was for this reason that MTMA worked in such close coordination with the industry and governmental groups to develop a current total national transportation capability within the continental United States and to establish machinery to update that capability as further studies are made and conditions change. For the most part, capability predictions are conservative. Because of the pressure of time and because they are essentially first efforts, calculations of capability will require refinement and adjustment as continued study and analysis are developed. This will be done.

Although theoretical military requirements have been developed and measured against the capabilities of the major modes which serve the Department of Defense, any appraisal of the adequacy of the

national transportation system must be based upon complete consideration of total national transportation requirements, including those of the civilian economy and the war-supporting industries.

DOMESTIC TRANSPORTATION ALLOCATION PROCEDURE

The DOD recognizes that it is but one claimant for transportation resources within the continental United States under any and all circumstances. Chart 3 depicts the procedure which is in the process of establishment and through which the DOD will secure transportation in an emergency to meet military requirements when allocation becomes necessary. The shipper services (Army, Navy, Air Force, and Marine Corps) determine their requirements and pass them to MTMA for collation and analysis in relation to the appropriate military planning concept. MTMA consolidates all military requirements submitted and passes them to the JCS for validation. Total military requirements, after validation, will be processed to the OCDM for assessment in relation to other national requirements. After this assessment has been completed, OCDM will allocate to the respective claimants the transportation capabilities available within the time period concerned.

A further word of explanation, I believe, is appropriate to clarify one point. The bar on the chart labeled "JCS" should more properly be labeled "DOD," inasmuch as military requirements are presented and defended to OCDM through the Office of the Secretary of Defense. OCDM allocations to the DOD return by the same channel and are allocated to the military services by the Joint Chiefs of Staff. JCS will indicate to the individual military departments those allocations which will be used by MTMA as the basis for routing and permitting the traffic which generates in response to the allocations. Parenthetically, it is emphasized that MTMA has in being today the machinery necessary to initiate instantaneously the permitting and routing of DOD traffic under any conditions of emergency. The final step in the process is the initiation by the shipper services of the movement of their personnel and things. This procedure, briefly described, represents the mechanics for the marriage of military requirements with other national requirements; the allocation of capability in response to military requirements; and the application of controls with respect to military movements generating under conditions of emergency whenever allocations of transportation capabilities become necessary.

PASSENGER MILES—NATIONAL VERSUS DOD

Before any discussion of mobilization requirements of the military under varying conditions of mobilization and war, I believe that it would be interesting to you to observe recent trends in the distribution of DOD traffic in this country via the principal commercial modes in relation to the national trends via the same commercial modes. Chart 4 indicates the passenger picture. I realize that on the surface this appears to be a rather complex chart; however, I think the comparisons shown are significant. National usage by mode is shown by solid lines. DOD usage by mode is shown by dotted lines. All lines are plotted in terms of percentages of total

passenger miles utilized during the calendar years shown. The solid lines reflect national usage of rail, bus, and air during the calendar years 1946 through 1957. I do not have data for later years because they have not yet been compiled and released by the Interstate Commerce Commission. The dotted lines indicate total DOD percentage utilization of rail, bus, and air passenger service during the period calendar years 1954 through 1957. Statistics for previous years were not readily available. During periods covered, DOD has used a greater percentage of both rail and air transportation than has the national economy. DOD utilization of bus transportation is somewhat less than the national average. This deviation from the national average is explained by the fact that the DOD activities are relatively widely dispersed and, therefore, comparatively long-haul transportation is required. This long-haul transportation requirement is primarily levied on the rail and air modes. The national average for bus travel is greatly influenced by short-haul intercity and commuter travel—a type movement in which the military is a minor participant. It should be noted also that the national usage figures are total figures in which DOD utilization is included.

FREIGHT TON-MILES—NATIONAL VERSUS DOD

Chart 5 reflects a similar comparison, in the freight field, of the national and DOD percentage utilization of rail and truck, the two primary modes used to transport DOD freight domestically. The analysis of the national trends, depicted by this chart and the previous one for passenger, shows clearly the national downward trend in rail traffic—both passenger and freight—and corresponding upward trends nationally in the use of truck and air. DOD patterns have generally conformed to national trends. In both freight and passenger business, DOD percentage utilization of rail service exceeds the national percentage. This is likewise equally true concerning truck service. The explanation of this situation is relatively simple. The DOD has comparatively light requirements for movement via commercial pipeline or barge lines and consequently makes less use of them than does the national economy.

My remarks, for ease of presentation, will cover the passenger situation in full first and then the freight situation.

PASSENGER SITUATION

I realize that the primary interest of this subcommittee is to determine the adequacy of commercial transportation systems to meet the requirements of the Nation in the event of an emergency. For that reason, only that capability which could be generated by commercial transport equipment presently available to the national transportation industry has been considered.

In our analysis of the passenger-carrying capability of the national transportation industry within CONUS the principal modes which serve the Department of Defense—rail, bus, and air—were all considered. Specifics as to magnitude of military requirements for commercial passenger capability are classified and are furnished in the classified text.

RAIL

The national rail passenger-carrying capability within CONUS appears to be more than sufficient to meet the needs of the military under presently foreseeable circumstances. Under certain conditions, military needs for some rail passenger-carrying items of equipment might increase considerably above normal peacetime usage. However, before any final determination as to overall adequacy of the system can be made, the requirements of all other claimants against this resource must be computed and considered together with those of the military.

BUS

The passenger-carrying capability of the motor bus industry based only upon the class I and the class II and III segments of the industry also appears to be more than adequate to meet potential military requirements. Additionally, in the motor bus area a sizeable cushion is available in the capability of additional intercity bus equipment, other than classes I, II, and III (school buses and other similar items) which could be utilized if necessary. Here, as in the case of rail transportation, military requirements in any emergency situation would increase considerably above the normal peacetime usage. Also, as in the case of rail transportation, any determination as to overall adequacy of the system must include full consideration of the requirements of all of the claimants against this resource; not just those of the military.

AIR

The passenger-carrying capability of the air-carrier industry available for domestic use, after equipment assigned to Civil Reserve Air Fleet (CRAF) has been assigned to international service overseas, is limited to equipment assigned to the war Air Service pattern (WASP). Inasmuch as the general capability per four-engine plane is roughly three times that of a two-engine type, it is desirable that additional four-engine planes be assigned for WASP. The introduction of new jet aircraft should release some four-engine aircraft from CRAF to WASP.

DOD PASSENGER MOVEMENT REQUIREMENTS

Military requirements for transport passenger capability reach their peak impact for rail, bus, and air during the same period. These requirements are available by time periods under varying conditions, but due to classification, are restricted for inclusion in the classified text.

DOD PASSENGER REQUIREMENTS UNDER PRIOR CONCEPTS

Current DOD requirements differ from those stated previously by the DOD to the Subcommittee on Surface Transportation of the Senate Foreign and Interstate Commerce Committee (Smathers subcommittee) and before the Interstate Commerce Commission. The statement given to the Smathers committee was predicated on World War II experience and a concept of a long buildup period with reliance almost exclusively on rail service. The views expressed later before the Interstate Commerce Commission were based on a shorter buildup period and included some use of the air and bus modes. Today, the

passenger requirement of the DOD, developed by the services in support of certain hypothetical conditions, is considerably less than prior forecasts and appears to be within reasonable limits of the commercial carriers' capability. The marked differences between the past and today stem primarily from current concepts which provide for changes in force structures and from more refined methods of calculating. Nothing is static in the process of requirements determination as changes in concepts of war are necessitated by technological advances.

PASSENGER SUMMARY

Our conclusions based on our analyses are that the most significant impacts of military requirements will be for pullman and air-passenger service. In this respect, some military pullman traffic could be diverted to coaches and buses, in the event that bottlenecks or short-supply situations develop, and providing that such diversions do not conflict with on-the-spot military requirements. Additionally, there is an extremely large reserve bus capability which is a potential cushion for use in emergency.

Capabilities forecast for the various modes are considered conservative. Under conditions of emergency, these forecasted capabilities could certainly be expanded to some extent.

The key, in my opinion, to effective utilization of available passenger capability, via all modes, is the establishment in being of an effective national transportation priority and control system. This system must be completely coordinated, activated, and ready to go. An air priority system must be ready for immediate implementation in a general mobilization or in war.

The determination of the adequacy of the domestic transportation system cannot be definitely calculated based upon military requirements alone. For such a determination to be made, military requirements must be married with essential civilian requirements, including those of the war-support industries.

FREIGHT SITUATION

The remainder of this presentation will cover military requirements for commercial freight transportation service and the capabilities of the various modes to meet these requirements.

DOD FREIGHT MOVEMENT REQUIREMENTS

The major impact of DOD military freight requirements occurs during the same peak period as DOD passenger requirements. (For specifics, please refer to the classified text.)

RAIL

DOD requirements for commercial rail freight equipment was computed by major type of equipment and measured against predicted national capability. Because of its classification, these data are included in the classified text.

TRUCKS

The impact patterns for military requirements for general purpose van equipment, flat-bed equipment, and refrigerated trucks are similar to those for railway equipment. (For details, please refer to the classified text.)

AIR

For details of DOD requirements for commercial air freight capability, please refer to the classified text.

FREIGHT SUMMARY

The most significant impacts of military requirements in the freight field are on rail and truck flat and tank-car equipment, and for air freight service. Requirements for air freight capability are much the greatest, percentagewise, when compared to existing capability. Here, as in the case of passenger-carrying capability, the total requirements of all claimants against freight-carrying capability must be computed and evaluated against the total capability of the national transportation industry before any determination as to overall adequacy can be made.

(The charts referred to are on pp. 156–158.)

General MORRIS. Mr. Chairman, there were 12 questions submitted by you, sir, to the Department of Defense. With your permission, I would like to read each question and answer it at that moment in case it hasn't been covered specifically with any of the testimony that I have offered heretofore.

By letter dated May 13, 1959, your chairman, Congressman Kilday, requested the views of the Department of Defense regarding 12 basic questions pertinent to this inquiry. Some of these questions have been answered in my previous remarks. By way of summary, I shall state each question and for those which have not been previously answered will provide answers as they pertain to the Department of Defense, and specifically fall within the province of the Military Traffic Management Agency.

Question 1. Have the Armed Forces determined what their domestic transportation requirements would be in the event of full-scale mobilization?

Answer. Yes. In my foregoing remarks, I have answered this question in detail.

Question 2. If so, upon what modes of transportation and in what relative proportions and amounts are the military transportation requirements expected to fall?

Answer. The answer to this question is covered in full in the presentation offered today. Parenthetically, prints of all slides used today, covering details specified by this question, are included with my remarks for the record.

Question 3. What would be the relative reliance of military agencies on commercial transportation as compared with its own modes of transportation?

CHART 1

MISSION

DIRECT AND CONTROL PROCUREMENT AND USE OF COMMERCIAL TRANSPORTATION SERVICES IN CONUS.

DEVELOP EMERGENCY PLANS FOR:

USE, CONTROL AND OPERATION OF MILITARY-OWNED DOMESTIC SURFACE TRANSPORTATION RESOURCES; AND

USE OF COMMERCIAL TRANSPORTATION RESOURCES AND FACILITIES MADE AVAILABLE TO SUPPORT MILITARY MISSIONS.

CHART 2

COMMERCIAL TRANSPORT DATA SOURCES

PASSENGER

RAIL - INTERTERRITORIAL MILITARY COMMITTEE

AIR - WAR AIR SERVICE PATTERN

BUS - NATIONAL ASSOCIATION MOTOR BUS OPERATORS

FREIGHT

RAIL - ASSOCIATION OF AMERICAN RAILROADS

AIR - WAR AIR SERVICE PATTERN

TRUCK - AMERICAN TRUCKING ASSN

CHART 3

Domestic transportation allocation procedure

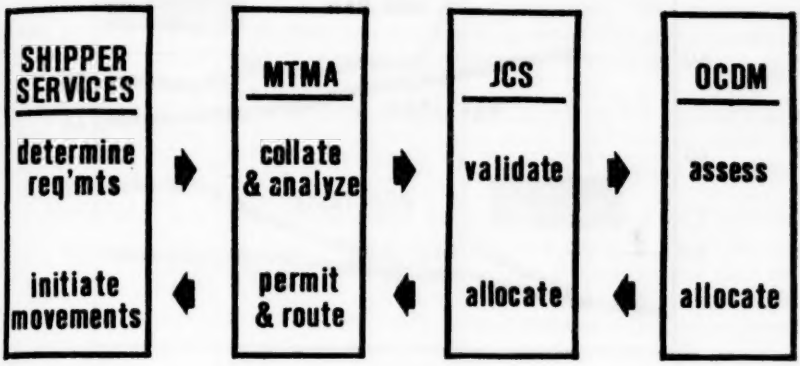


CHART 4

PASSENGER MILES—NATIONAL Vs DOD

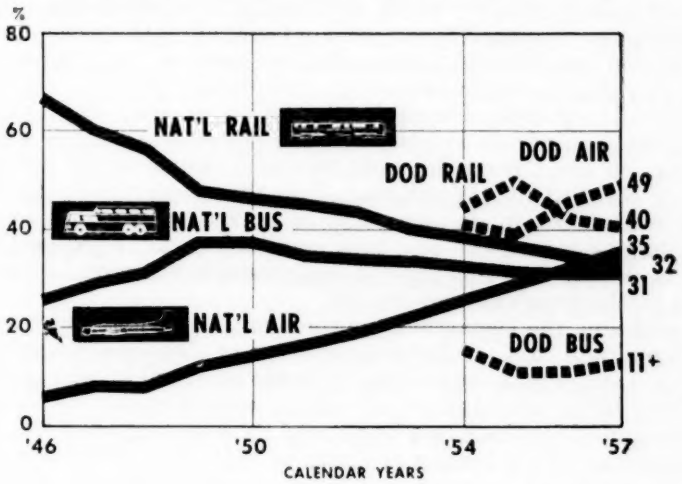
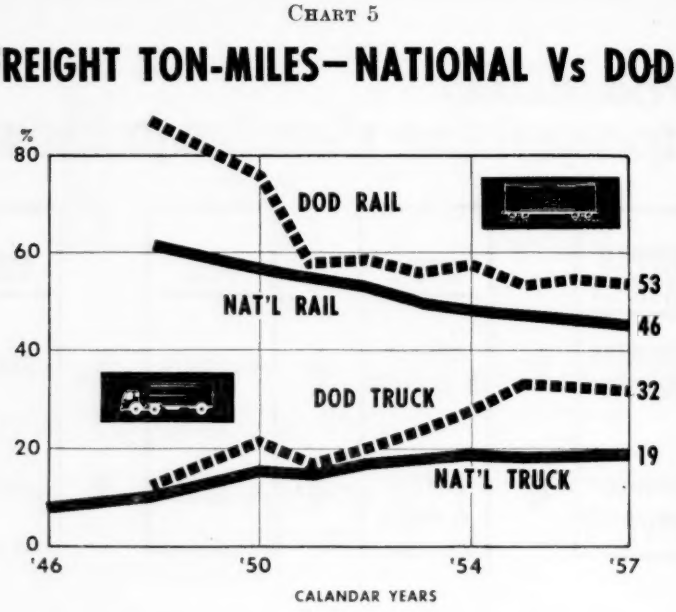


CHART 5



Answer. Except for a relatively small fleet of military railroad cars, operated in interchange service by the U.S. railroads, the military departments rely almost exclusively on the commercial carriers to fulfill military transportation needs within the United States. Military requirements presented today were calculated on the basis of primary reliance on commercial transportation systems, and included that military railway equipment within the stated railroad capabilities.

The military interchange fleet consists of tank cars and other specialized equipment which have been put into service over a period of years to meet recurring military needs which could not be adequately satisfied by the railroads. In that connection, the Department of Defense, in its ownership of tank cars, is no different than many large shippers who own their own tank cars. Parenthetically, it may be added, that this type of equipment is not normally available to the public from railroad sources.

In addition, the Department of the Army leases and stores a number of old pullman cars. A large percentage of these are not in operable condition and would require considerable overhaul involving time and relatively large expenditures to make them serviceable. No capability was computed for these cars because of their present condition. Since the inception of the leasing program in 1949, the size of this group of cars has increased to a present total of approximately 1,700. The Department of the Army is reevaluating the lease program to determine the size of the fleet to be retained in reserve in view of reduced military requirements for pullmans in current war planning as compared to past requirements; the condition of the cars, and the time frames involved in current concepts of mobilization and war.

Question 4. If answers to Nos. 2 and 3 constitute changes from past experience as demonstrated in World War II and the Korean action, what changed or changing concepts of transportation or logistic requirements are involved?

Answer. The primary cause for changes in military requirements from past experience is the fact that requirements submitted in this presentation were computed by the military services from an approved war plan rather than by empirical adjustment from World War II or Korean war experience. Concepts of war evolving from revolutionary changes in instruments of warfare, coupled with the rapid development of air transportation, have also materially influenced logistical requirements and operations. To meet this requirement, the military logistical systems are being geared during peacetime to more rapid movement of men and materials, thus resulting in a change of requirements from past experience.

Question 5. Since experience in these instances of military action has been limited to mobilization without attack on this country, what alternate plans have been made for the availability and use of transportation facilities?

Answer. Two basic plans have been developed by MTMA in coordination with the military services for the control and movement of military traffic during emergency. One provides for the use of military highway transport vehicles in local areas when commercial carriers are unable to meet military requirements; the other, involves a system of coordinated control of the military use of commercial transportation. Under the first plan, highway transport vehicles from all military services would be assigned to common pools located in the different zone of interior army areas. Requirements for transportation would continue to be submitted to MTMA by military shipping activities. MTMA would designate the use of military vehicles only in those cases where commercial carriers were not capable of meeting military requirements.

The second plan contemplates that the current peacetime procedure employed in the regulation of military export freight traffic would be expanded by MTMA and the military services to meet any emergency situation. This procedure is readily adaptable to the control and permitting of domestic military traffic, as well as export traffic.

Question 6. Does the Department of Defense regard present transportation systems and facilities adequate to meet anticipated requirements?

Answer. As indicated in this presentation previously, the Department of Defense believes that sufficient capability does exist in the transportation system to meet military requirements. It is anticipated that the same premise will be true in connection with military requirements in support of the other war plans being evaluated; however, no DOD representative is in a position to comment upon the overall adequacy to satisfy both military and civilian requirements. Development of total requirements and capabilities is a responsibility of the Office of Civil and Defense Mobilization. Until the civilian requirements have been determined by OCDM, and added to the military requirements, the overall adequacy of the transportation system cannot be reliably predicted.

Question 7. If regarded as inadequate, in what respects are our transportation systems lacking and what should be done, if anything, to make them adequate

Answer. Although the overall adequacy of the transportation system is unknown, it is clear that the present airfreight capability is

very limited. However, some measure of cushion will be provided if the significant rate of growth in airfreight ton-miles is further accelerated by significant reductions in ton-mile cost, installation of turbopowered equipment specifically designed for airfreight service, and additional capability generated as a result of the conversion to jet passenger service.

Question 8. Assuming that the military would preempt as much of the commercial transportation as necessary to meet its requirements, what effect would this have on other essential governmental and civilian requirements

Answer. The answer to this question could more properly be given by the Office of Civil and Defense Mobilization. However, in order to avoid misunderstandings which might arise from the word "preempt," with your permission, I would like to make a general observation. It is clear that essential civilian needs must continue to be met. Therefore, authority for the decision on allocation of commercial transportation capability to satisfy both civilian and military needs is properly vested in OCDM rather than in the military establishment. If military capability and the commercial allocation became inadequate, we would have to go back to OCDM in an attempt to get a further allocation of capability to meet maximum essential military requirements. The nub of this problem, as it relates to the military, is to provide the Department of Defense effective machinery at national level to use its allocated transport capability within priority guidance. MTMA, the Department of Defense agency charged with permitting and routing responsibilities, is organized and equipped to perform this mission in peace, mobilization, and war.

Question 10. In planning to meet transportation requirements how does the Department of Defense evaluate such considerations as susceptibility to damage and destruction, ease of restoration, relative cost in time, manpower, and materials and potential capacity to to expand?

Answer. Since the planning function with respect to the U.S. transportation systems is lodged with the Office of Civil and Defense Mobilization rather than with the Department of Defense, specific comparisons regarding the factors specified in this question should come from OCDM. However, with your permission, I would like to comment briefly on the situation as I see it.

I believe that in any war of the future, success will be governed by our speed of reaction, primarily, with the facilities that are available at the initiation of hostilities. One of the most important facets of speed of reaction is transportation. To have effective domestic transportation in a period of conflict, we must have a national traffic control system. During World War I it required 15 months to create an effective traffic control system; during World War II, 5 months were required to do the same job. In any future emergency, an effective national control system must be instituted immediately.

We have, in the Department of Defense, in being, a military export traffic control system which can be applied immediately for all military traffic regardless of its destination. This military control "machine" can be readily meshed with a national control system which in my opinion, is the key element to effective utilization of transportation during an emergency. Such national machinery should, in my

judgment, be established, oiled, and ready to function under any condition of mobilization or war.

Question 11. To what extent do Department of Defense policies and practices in time of peace help strengthen the carriers which will be needed in event of mobilization?

Answer. The almost complete reliance of DOD shippers on commercial carriers for the transportation of military passenger and freight is the most important single practice aimed at strengthening and facilitating the growth of the national transportation system within the United States. This practice is in consonance with the national transportation policy and follows the mandate of the Secretary of Defense that commercial transportation service within the United States will be employed for military traffic when it is available and readily obtainable and capable of meeting military requirements.

Related DOD pronouncements require that military economic resources will not be employed in the procurement of transportation services in a manner which will adversely affect the well being of the transportation industry, and that preferential consideration will not be accorded one mode of transportation as against another in the routine procurement of transportation services.

Question 12. What additional information, guidance, or suggestions can the Department of Defense supply to aid the subcommittee in its efforts to determine the adequacy of our transportation systems to meet future defense requirements, whatever they may be?

Answer. I believe that I have covered the items generally within the purview of the Department of Defense and specifically within MTMA's area of responsibility. We will continue to refine our requirements reporting system and include changes in concepts as they arise. However, as emphasis, I reiterate, to be adequately meaningful for your purposes these military requirements must be combined with civil requirements to develop a national evaluation.

Mr. Chairman, that concludes my statement. I will answer such questions as I can.

Mr. KILDAY. General Morris, for myself, and I am sure for the other members of the committee, I want to thank you for the statement you have brought us both in content and presentation; and also for the manner in which you presented it. The entire matter has been excellently handled. It is very helpful to us. We appreciate it sincerely.

Are there questions?

Mr. VAN ZANDT. I want to say, General, that is one of the finest presentations that I have ever listened to since I have been in Congress. I want to commend you for it.

All during your presentation I could not help but draw on the information that was made available to another committee in the Congress of which I am a member, and that is the Joint Committee on Atomic Energy. As you know, recently the Holifield subcommittee, of which I am a member, sat for several weeks and took testimony.

Then following the Holifield subcommittee hearings we had a top secret briefing by the Department of Defense. As a layman I have reached the conclusion that we have pretty firm estimates of what will happen to the United States in the event of a war.

Now, the question is this: In the event of an all-out nuclear attack and taking the statements that were revealed to the American people through the Holifield committee, are we in a position to recover transportationwise from such an attack?

General MORRIS. I wish I could answer that, sir.

I do not wish to infer in the slightest that there is no DOD participation with these various exercises of which you speak—we do engage in them. We have just completed engaging in one with OCDM. We will later on—this year and we did last year—those are specific examples.

I just don't think, sir, without specifics as to what is gone and what is left, and what the requirement would be under those conditions, that anybody can precisely say.

Mr. VAN ZANDT. I have to confess, General, based on the knowledge that was conveyed to me as a member of the committee, the Holifield subcommittee, and the facts that you have presented here this morning, if I were an expert in the field I would find myself in the same position that you are, that you just can't predict what will happen.

There are two points that come to my mind as a result of your testimony. First, I am a little doubtful whether the Office of Civil Defense Mobilization is playing the part that it should play in the planning for such a situation. We are talking about an all-out nuclear attack. I detected through this statement of yours that you are inclined to believe that probably a little more, or an acceleration of effort and planning on the part of OCDM is necessary. I am putting you on the spot with this question. I think you should speak frankly.

General MORRIS. Could I say it this way, sir: I as a military man certainly endorse, recognize, and applaud the control of this type of a thing by the civilian elements of Government. Our concern, as I tried to say it in various words, is we are going to have to get along with what we have got under any condition. To me the getting along is the ability to use what you have.

Without being critical of anyone, we have devoted a great deal of our effort in MTMA specifically this last year—and I would say categorically it has been my No. 1 effort—to concern the readiness of MTMA to handle military traffic under any condition. That is why we have a control system in being today for our export traffic. I don't permit domestic traffic today in the same way I would in time of war, because it isn't necessary. We have the machine. It exists. It has been tested. It is not perfect, but from World War II experience where controls were necessary, we know we have the machine in being.

What I plead for is the same type of readiness on a national scale. I am not criticizing. I don't know what the problems of OCDM are specifically with respect to resources capability, and so forth. But we talk in terms of these various measurements of equipment, what the various carriers say they have operable, and so forth.

My problem is, what can you do with it when the chips are down? I just don't see that type of national machinery in being. I am familiar, as I am sure you are, sir, with the plans that are being laid. Certainly you can applaud efforts in this direction, but a plan as opposed to implementation is two different things.

I certainly do not mean this is a sense critical. I have just discussed these matters with the proper people in OCDM whom I have been assured by them agree with me, that this type of readiness is necessary.

Mr. VAN ZANDT. In other words, what you are advocating here, then, is my second point, and that is a national traffic control system?

General MORRIS. Yes, sir.

Mr. VAN ZANDT. As I understand it, it would have to be administered by the Office of Civil Defense Mobilization?

General MORRIS. That is where it is vested.

Mr. VAN ZANDT. Maybe Congress is a little at fault because we haven't been too generous in our appropriations to OCDM over the previous years.

Mr. BECKER. Wouldn't it seem reasonable today, General, that you have posed here your requirements and capability?

General MORRIS. Military.

Mr. BECKER. Under these concepts wouldn't it seem reasonable today, and this is putting a direct question to you, that, on the other hand, OCDM should be ready to do the same? Shouldn't they be able to depict their requirements, civilian requirements, by eliminating certain unnecessary transport at a given time and say, "We can provide this equipment for the military"? Isn't it reasonable to assume that if they haven't they must get to this phase in order to solve the problem we are interested in?

General MORRIS. I am sure you wouldn't really expect me to say whether they have the capability in being. I say it will be for you to make an assessment of the adequacy of the domestic transportation plant to meet the total requirements of this country. You in my judgment cannot make such a definitive analysis based on military requirements alone.

Mr. BECKER. To answer this one thing, and I will ask you it now, we must then get the same thing from OCDM that we have gotten from you today?

General MORRIS. I would say you certainly need the same general prediction of civilian requirements, including those of the war supporting industry to be married with the military requirements, then you have a total national requirement. Until then you don't.

Mr. VAN ZANDT. This is off the record.

Mr. KILDAY. Off the record.

(Discussion off the record.)

Mr. KILDAY. Are there other questions?

Mr. BREWSTER. General, can you recommend to us or do you know if any specific legislation is necessary to implement such a national traffic control system?

General MORRIS. In my judgment the proper assignments of responsibilities exist.

Mr. BREWSTER. No further legislation is necessary?

General MORRIS. I am not an expert on it, but in my judgment there are present proper responsibilities assigned to provide for this type of national machinery. Whether there are adequate tools or capabilities I am not in a position to comment.

Mr. BECKER. Mr. Chairman, I haven't any question. I do have a comment in view of the situation of OCDM. When Mr. Jones was here the other day he made estimates to this committee, and I said

at that time I was a little bit tired of listening to studies coming in of when we are going to have a plan. When are we going to know some results?

A letter was introduced in the record yesterday from Mr. Jones correcting some impression he had made last week when he was here. I am happy he made that correction.

I think, Mr. Chairman, we ought to have Mr. Jones, or somebody else, back here again to try to coordinate a little bit of what we know now from the military standpoint and what Mr. Jones has said in this letter.

Mr. KILDAY. We will proceed with the agenda that has been agreed upon. I assume that there will be a number of places developed in going through the agenda where we will have to have additional hearings.

Mr. BECKER. I just want to add my comments of the wonderful presentation made. I agree with the chairman, it is excellent.

Mr. COHELAN. May I, too, General, heartily concur in the comments made in regard to the presentation. It has certainly been a revelation to me as a new member of the committee. I am fascinated, however, with some of the fundamental conceptions and your methodology intrigues me. Therefore, some of the questions I am going to ask relate to methodology.

You say:

> Reliance upon the commercial transportation industry of this country is the fundamental base upon which MTMA has been established—

I jotted down a note, what would an alternate plan be if there is one?

General MORRIS. Could I first amplify that "reliance"? I announced the basic policies of the utilization of the commercial capability in that we do not use military capability except in circumstances where the commercial falls short.

To me this creates a mutual relationship. I like to think of it in terms of the commercial carriers, because of this policy of reliance, sharing this responsibility for national preparedness to the same degree, if you will, that we do in the military who rely on it. This is a mutual partnership relationship, because we don't just say this; we practice what we preach. We use commercial transportation.

In my presentation I alluded to what we would do in area where commercial fell short. That, we would deplore. We hope we don't reach that stage. But if it comes to pass, we have a plan which has been approved and coordinated with the services wherein capability of the surface type not required for tactical, strategic purposes of the military, would be made available for MTMA's use to augment commercial sources.

This is not a peacetime thing. This is a wartime thing. So, to summarize this as we see it, our reliance is on the commercial industry of this country. This is our aim, our objective. They share with us a partnership arrangement because that trust rests with them in peacetime, and we count on them in time of war. We recognize, as Mr. Van Zandt brought out, there will be times when we don't get all we want.

Secretary McGuire said it yesterday, and obviously we will agree. If you don't get any more, then we apply the military resources that are available. If that falls short, we live without it.

Mr. COHELAN. The thing that has stimulated the question in my own mind is in other areas of military activity. The military makes claims that they should maintain certain activity in order to maintain control. I realize that we have to accept the situation. But I am thinking, isn't it true in a wartime situation, as described, this is virtually total mobilization? I don't see how you differentiate really between the commercial enterprises that affect transportation.

General MORRIS. Could I say this? With respect to your question as it relates to MATS and MSTS, which do maintain in being a certain nucleus, with your permission, sir, I would respectfully ask would you consider that question tomorrow when General Tunner of MATS and Admiral Gano of MSTS speak, because they will give you the reason why they have a nucleus. I don't think it improper or infeasible for the military in this country to rely on the commercial transportation resources. To me that is the American way of life. I think it is a sound philosophy to rely on them. But the key is effective utilization, and this allocation system of how much the military gets in, in my judgment, is a national decision which has to be reached under any condition of war.

Therefore, we feel that the key as far as we are concerned is the application of control, the permitting of the traffic, if you will, within the capability given to us.

Mr. COHELAN. General, agreeing with the concept, doesn't that imply, then, that in order to execute our plan with a minimum of error that we should definitely be considering to a greater extent than we presently are the quality aspects of the problem? All the measurements I saw were quantitative.

General MORRIS. You are speaking of the application of operational controls. I didn't get into that. Actually, this is not new to us. We have before instituted permitting and the selection of the modes to meet our requirements within a given capability—and I would like to say this, I guess it is all right to put it on the record, one of the things that we are going to do—I will give you an example—I have been working in close coordination with the American Trucking Associations because I say to them you have a tremendous capability, but you represent thousands of carriers, and for us to use whatever proportion of highway transport is made available to us would be a terrible problem under the conditions envisioned by Mr. Van Zandt where you have catastrophe on your hands.

So what I need is a way to deal with the trucking industry not as an individual trucker, but more through machinery that the American Trucking Associations provides, the same controls to a degree that the Association of American Railroads provides for the railroads.

So we are working in that direction to get the qualitative selective controls and use of types of equipment, and to be responsive to our needs at a given moment. This is an uphill fight. But I will say this: The American Trucking Associations have grabbed this thing. They are working on it. I have been assured that they will provide me regional machinery, because my organization is divided up into five chunks in this country, so that I can deal with them to get things done within the capability made available to me by process through the Office of Civil Defense Mobilization to the Joint Chiefs of Staff, which goes down to the service.

Mr. COHELAN. Would you be willing to make a recommendation——

General MORRIS. I don't think it needs any corrective action by legislation. I think this is a workmanlike thing.

Mr. COHELAN. I didn't complete my statement.

Would you be willing to make a recommendation, for example, that the Government should buy the required aircraft equipment as has been suggested by another committee chairman for the purposes of improving our basic position in this area, airfreight, and as suggested in your own statement

General MORRIS. Well, this is an economic and political question which I, as a military man, do my utmost not to become involved in, because then you are talking about such words as "subsidy," and things of that nature, and it would seem to me——

Mr. COHELAN. Excuse me.

General MORRIS. Maybe I am not answering your question.

Mr. COHELAN. You are doing it. I don't want to get you in that kind of position. It isn't my intention to.

General MORRIS. To answer your question, sir, I don't have a recommendation as to what should be done specifically with respect to these modes. I think that question involves economic and political factors, but how firm a definitive conclusion can be drawn until you know what the total picture is, I don't know.

Mr. COHELAN. Would it be fair for me to say, since it is classified information I can't use it in my own work in the Congress, can I assume this is needed?

General MORRIS. I believe this, sir, that we are in a revolution in transportation. It is apparent. The efforts now being made specifically in two areas, one, by the Secretary of Commerce in his study group which gets into this range of items in response to the President's appeal in his budget message January 1959, which is a comprehensive all-inclusive wrap-up recommendation, plus the efforts of the newly established study group under Senator Magnuson. I think these two answers—these two study groups—will provide the answers that you seek, sir. I frankly don't know the answers.

Mr. COHELAN. Turning to another area, if I may, I would like to have you amplify on the reasoning for selecting these hypothetical cases. In other words, I imagine there must be an infinity of possibilities one could select.

General MORRIS. I cannot answer that except that was the guidance provided by the Department of Defense through the Joint Chiefs of Staff to the services on which this study was based.

Mr. COHELAN. I was interested in this on the basis of previous testimony about the pullman situation. You then do not recommend, as has been recommended by Professor Harbinson in a recent article in the Political Science Quarterly on "Defense Transportation," in which he suggested that the fuel requirement would be such that the possibility of the cheapest and best form of transportation in the event of war would most likely be the railroads.

He suggested, if I remember his conclusion correctly, that we stockpile pullmans.

I take it on the basis of your testimony that you do not agree with that recommendation.

General MORRIS. Since 1949 the Department of the Army has been stockpiling pullmans on the basis of 3½ percent per annum of an amortized value of $3,000, which was set very low as a patriotic gesture by the Pullman Co. That means we are paying $90 a year to keep a car from disappearing from the horizon.

It is true that many are in a miserable state of disrepair.

Accordingly, the Department of the Army is reevaluating this requirement in the light of these studies, and subsequent ones. What will be the ultimate answer, sir, I don't know. I am certain that some effort will be made to reduce the size of it if continuing studies indicate trends of this kind.

I would like to say something from a personal point of view. I don't say it because I have an Army suit on. But I think the decision of the Department of the Army to do this a few years ago was a very sound thing because when World War II broke out they had something in the order of 1,100 tourist sleepers. They were applied to service, and the war lasted a long time.

You are faced with this impact of what do we do in light of these new conditions. I would be hopeful that if it became necessary, in light of the studies by the committee determining the total national adequacy, that if it became necessary to stockpile a given number of equipment units, regardless of what they may be, and to maintain them in a state of repair, so as to be instantly available, that it would be considered as a national problem and not put the tab on the Department of Defense. Because then it would be a national reserve that you were setting aside.

This is my personal feeling.

Mr. COHELAN. At the moment you don't feel we should stockpile cars——

General MORRIS. In my judgment some should be kept. How many I think has to be really massaged and thought through. I do not personally advocate complete scrapping. That is my personal opinion. That is not an official Department of Defense position. I think some should be kept. How many, I don't think the factors are known at this stage precisely what it should be.

Mr. COHELAN. General, we are getting near the end of the morning period here. I would like to question you some more in regard to the fuel situation later on. I imagine this will take time.

General MORRIS. May I say something off the record?

Mr. KILDAY. Yes.

(Discussion off the record.)

Mr. KILDAY. Anything further?

The House is in session, and we do not have permission to sit during the session.

We want to thank you again, General.

The committee will meet again tomorrow at 10 o'clock.

(Whereupon, at 11:55 a.m., the subcommittee adjourned.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

FRIDAY, JULY 24, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

EXECUTIVE SESSION

The subcommittee met at 10 a.m., the Honorable Paul J. Kilday, chairman of the subcommittee, presiding.

Mr. KILDAY. The committee will be in order.

Our first witness this morning is Admiral Gano.

Admiral GANO. I have a prepared statement which I would like to read, with your persmission.

Mr. KILDAY. You can go ahead with your statement, without interruption.

STATEMENT OF VICE ADM. ROY A. GANO, U.S. NAVY, COMMANDER OF THE MILITARY SEA TRANSPORTATION SERVICE

Admiral GANO. My name is Roy A. Gano, vice admiral, U.S. Navy. I am the commander, Military Sea Transportation Service. In appearing before you today it will be my purpose to explain:

(*a*) The role of the Military Sea Transportation Service in providing ocean shipping for the transportation of Army, Navy, Air Force, and Marine Corps personnel, and material, and

(*b*) The ability of the Military Sea Transportation Service to handle the export portion of the movement of the personnel and material which has been mentioned by the Executive Director, Military Traffic Management Agency, Maj. Gen. I. Sewell Morris.

BACKGROUND

On August 2, 1949, the Secretary of Defense established the Military Sea Transportation Service, which combined the Army and Navy Transport Service, in the interest of efficiency and economy, as a unified ocean transportation service for the Department of Defense under the direction and control of the Department of the Navy.

Mr. KILDAY. Admiral, will you suspend for just a moment. I wish to announce at the beginning of the meeting this morning that some of the testimony is top secret, and if there is anyone in attendance who is not cleared for this classification it will be necessary for them to withdraw. Is there anyone present who is not cleared for top secret?

Go ahead, Admiral.

Admiral GANO. On May 28, 1956, the Secretary of Defense designated the Secretary of the Navy as single manager for ocean trans-

portation within the Department of Defense. The objectives of this assignment were stated to be:

(*a*) To provide the most effective and economical ocean transportation for the armed services.

(*b*) To prevent duplication and overlapping of effort between and within military departments.

(*c*) To apply to the mission of providing ocean transportation service within the Department of Defense the basic pattern for all organizations performing a multiple support mission.

SINGLE MANAGER FOR OCEAN TRANSPORTATION

The Secretary of the Navy as the single manager is responsible to the Secretary of Defense for ocean transportation. He has designated the commander, Military Sea Transportation Service, as the Executive Director to manage the Single Manager Operating Agency for ocean transportation. It directs and controls all assigned functions for ocean transportation. It is organized as a major component of the operating forces of the Navy. COMSTS has no other duties but to direct the operation of MSTS.

POLICY

The Military Sea Transportation Service operates under an industrial fund concept, and provides under one authority, the control, operation, and administration of ocean transportation by Government-owned and commercial ships. It provides for the carriage of personnel, cargo, and mail for all agencies of the Department of Defense (excluding personnel and cargo transported by units of the fleet) and, as authorized or directed, for other agencies or departments of the United States subject to the policies of the Secretary of Defense.

COMPOSITION

To perform this mission, the Military Sea Transportation Service maintains a nucleus fleet composed of Government-owned ships which have been assigned by the Chief of Naval Operations to MSTS for the purpose of providing transoceanic, intratheater, intercoastal, and coastwise transportation of military personnel, cargo and mail. There are approximately 122 ships and craft now in this nucleus fleet. In addition, as a supplement to the nucleus fleet, COMSTS exercises control over certain commercial ships under time and voyage charter, and operates, four Government-owned ships obtained from the Maritime Administration under general agency agreement. Also, MSTS procures passenger and cargo space in ships of the regularly established American-flag lines. In performing his mission COMSTS keeps the Executive Director for Traffic Management within the United States informed, to the extent mutually agreed necessary, as to the availability of opportune MSTS operated coastwise and intercoastal lift capacity.

EMERGENCY PLANNING

COMSTS, as the Executive Director for Ocean Transportation prepares, revises as necessary, coordinates, and executes plans for the employment and expansion of MSTS in time of war or national

emergency. The basis for this expansion is the memorandum of agreement between the Department of Defense and the Department of Commerce. This memorandum, briefly, provides that, under conditions short of mobilization, the nucleus fleet shall be comprised of transports, cargo ships, tankers, and specialized types of ships in sufficient number:

(*a*) To carry out current logistic needs of the military departments which cannot be met by commercial interests,

(*b*) To provide immediate capability in an emergency, and

(*c*) To provide an adequate base for necessary expansion to meet emergency or mobilization requirements in support of approved plans for national defense.

At present there are in the MSTS nucleus fleet 23 transports, 28 cargo ships, 29 tankers, and 42 specialized types consisting of LST's, LSM's, and similar small craft. These, together with the ships which MSTS has under charter or other arrangement, plus those additional ships that can be chartered and/or requisitioned, are barely adequate to meet our wartime needs. Under conditions of full mobilization, the MSTS nucleus fleet will be augmented by ships of the U.S. merchant marine to the extent that its fleet will be capable of providing sufficient lift to meet initial outloading requirements and to provide direct logistic support to deployed forces. This augmentation is expected to fluctuate as requirements increase or decrease. The remaining capability required over and above that provided by the augmentation, will be obtained from the National Shipping Authority.

RELATIONSHIP OF MSTS WITH PRIVATE INDUSTRY

It has long been the announced policy of the Navy to support a strong American merchant marine. Never before in our history has the Navy, through the Military Sea Transportation Service, supported this policy in such a practical and effective manner. Approximately 78 percent of all funds expended by MSTS for its operations during the first 9 months of fiscal year 1959 were paid directly to various segments of the private shipping and associated industries. These direct payments amounted to approximately $246 million.

For the period October 1, 1949, when MSTS came into existence, through March 31, 1959, more than $3.3 billion has been paid directly to private industry by the MSTS. With this brief introductory statement of how and why MSTS functions, I shall now discuss the capability of MSTS to meet the shipping requirements of the Department of Defense in time of mobilization and all-out war.

INTERNATIONAL POOL OF SHIPPING

The present North Atlantic Treaty Organization concept visualizes the establishment of an international pool of shipping under the Defense Shipping Authority, consisting of substantially all allied shipping, plus the ships made available by friendly neutrals. From this pool, the member nations, through their appropriate national agencies, will be allocated a proportionate share of available shipping. The working agency of the Defense Shipping Authority as presently planned will be known as the Defense Shipping Executive Board (DSEB) and will have the function of allocating shipping from the

international pool to the appropriate national agency. It is anticipated that the National Shipping Authority will be designated as the agent of the United States for purposes of requesting and receiving shipping allocations from the international pool through the Defense Shipping Executive Board. The U.S. allocation will be suballocated by the National Shipping Authority for military and essential civilian needs in accordance with priorities established by the Office of Civil and Defense Mobilization (OCDM). The claiming agent for the Department of Defense will be the Military Sea Transportation Service. Commander Military Sea Transportation Service will request allocation of shipping required, in addition to the nucleus fleet, to meet Department of Defense requirements received from the military departments and in accordance with priorities established by the Joint Chiefs of Staff. The pool will be functioning as promptly as possible after mobilization.

I wish to emphasize at this point, that, when I speak of requirements and capabilities, I am speaking only of the military requirements previously presented to you by Military Traffic Management Agency. Capabilities include all merchant ships under effective U.S. control. This means MSTS nucleus fleet ships, commercial ships operating under U.S. flag, certain American citizen-owned ships operating under so-called "flags of convenience", (Panama, Honduras, Liberia) and such ships as can be reactivated from the National Defense Reserve Fleet within the prescribed period.

As you may have surmised, there are other military requirements originating at tidewater and there are other claimants which place additional requirements on the U.S. inventory of merchant shipping. These include the Office of Civil and Defense Mobilization who requires ships to transport essential commodities for warmaking purposes, and the fleets which require them for conversion to military auxiliaries.

SHIPPING REQUIREMENTS AND CAPABILITIES

The inventory of ships under effective U.S. control is sufficient in quantity to meet the emergency military outloading requirements of certain strategic forces of the United States. Requirements for these forces are for a period of 6 months of general mobilization followed by 2 months of war, and based on the assumption that no attack has been made on the Continental United States. These requirements cannot, however, be met when combined with all other wartime requirements for merchant-type ocean shipping unless a priority of allocation is made of available shipping. Other wartime requirements include ships to transport essential commodities for warmaking purposes, and ships for conversion to military auxiliaries.

In a recent study completed by the Maritime-Navy Planning Group, it was determined that deficiencies exist in present U.S. capability, both in quantity and quality, in varying degrees, in all three major categories of ships—passenger/transports, dry cargo ships and tankers.

The most serious numerical deficiencies during wartime occur in the category of dry cargo ships. The initial deficit is in excess of 200 ships and the deficit in subsequent months will be substantially greater.

Although a serious deficit in tanker capablity exists if mobilization were to occur now or in the immediate future, it is expected that currently scheduled construction is adequate to overcome this shortage by the end of fiscal year 1962.

Small initial numerical deficits exist in the passenger/transport capability. These shortages are considered manageable since they can be offset by the use of selective "hot-bunking" or utilizing passenger ships of allied countries or friendly nations.

The present numerical shortages, however serious, are less critical than the approaching block obsolescence of our passenger and cargo ships.

There are approximately 2,500 oceangoing dry cargo ships totaling 26,464,000 deadweight tons under effective U.S. control. Of this number, only 5 percent of the total deadweight tons are under 10 years of age; 46 percent are between 10 and 14 years of age, and the remaining 49 percent are over 15 years of age. Of equal seriousness is the fact that approximately 65 percent of the total inventory of ships have a designed speed under 12 knots.

The speed deficiency of the passenger/transport segment of the merchant fleet is illustrated by the fact that only 16 of the 159 ships in this category have speeds of 20 knots or more. The greatest concentration by type is in the 19-knot P–2's and 17-knot C–4's, of which there are 24 and 51 ships, respectively, representing over half of the total troop lift capability. These ships, together with the great majority of other smaller and slower types, were practically all built during World War II, and will be 20 years old within the next 5 to 6 years.

Approximately 47 percent of the tanker deadweight tons is 9 years or less, in age, the remaining 53 percent is divided about equally between 10 and 14 years, and 15 years and over.

Admiral GANO. Mr. Chairman, that completes my presentation.

Mr. KILDAY. Thank you, Admiral.

Are there questions?

Mr. Van Zandt?

Mr. VAN ZANDT. This last chart that you had on the screen, where you dropped down and you gradually build up; do the additional ships shown in the buildup come from the yards as a result of accelerated construction?

Admiral GANO. Not only accelerated construction, but also from those in the reserve fleet.

Mr. VAN ZANDT. Taken out of mothballs and they are now in service?

Admiral GANO. Very true, sir. Similar to what we did in the Suez crisis.

Mr. VAN ZANDT. In connection with the ships that are manned by civilians, when they move into an area like Lebanon or the Suez deal, did they receive a bonus?

Admiral GANO. Yes, sir, a bonus is usually given, and was given during the war. There are no bonus areas at the present time. In Lebanon they did not receive a bonus.

Mr. VAN ZANDT. How about the Suez?

Admiral GANO. They did not, but they received in Suez a war risk insurance which gives them a double risk insurance at that time.

The civilians do get this, and also our civil service marine personnel get the same benefits throughout this.

Mr. VAN ZANDT. Did we have this double-risk insurance in World War II?

Admiral GANO. Yes, sir.

Mr. VAN ZANDT. In addition to double-risk insurance they get a bonus?

Admiral GANO. That is correct. The bonus depends on the area and also upon the ports, the conditions that have been—the closeness of the war and also whether the ports have been bombed or not.

Mr. VAN ZANDT. In connection with the control, operation, and administration of ocean transportation by Government-owned and commercial ships, what percentage of the space of all available ships are you using at the present time?

Admiral GANO. You mean of our MSTS?

Mr. VAN ZANDT. Yes.

Admiral GANO. They are utilized almost 100 percent.

Mr. VAN ZANDT. Can you give us the cost per ton? What does it cost you to ship a ton in your MSTS ships at the present time?

Admiral GANO. Mr. Bull, can you answer that one?

Mr. BULL. That depends on the route.

Mr. VAN ZANDT. You do not have a general cost?

Mr. BULL. We have an overall cost. With a MSTS operation it is different from the commercial operation, in that MSTS has no control or any responsibility for terminal operations, and therefore does not load and discharge the ships. That is performed by the Army or Navy, so-called shipper services. So the only cost per ton that we have would be merely the manning and the hauling.

Mr. VAN ZANDT. From portal to portal?

Admiral GANO. That is right.

Mr. VAN ZANDT. Did someone say $4 or $5 a ton?

Mr. BULL. It is about $4.90 a ton.

Mr. VAN ZANDT. In connection with passengers, can you give us a general cost?

Admiral GANO. That again depends upon where they go. To cite our passage in the North Atlantic, I believe the troop rate is $55 from New York to Bremerhaven. However, the dependent or cabin class runs $169.

Mr. VAN ZANDT. What is your percentage of occupancy; that is, available space?

Admiral GANO. I would say in general our dependent or cabin class are utilized practically 100 percent at all times, whereas our troop varies on the routes and is generally about 50 percent overall. It is not utilized as much as the cabin class.

Mr. VAN ZANDT. The foreign-flag ships that make up part of the pool, I am thinking——

Admiral GANO. The flags of convenience?

Mr. VAN ZANDT. Yes. What arrangement do we have with these countries? Is there any subsidy that we give them, or any concessions?

Admiral GANO. I think you must understand, Mr. Van Zandt, that the flags of convenience are those ships that are citizen-owned, U.S. American citizens. But they are flying them for convenience in the flag of another country. These ships themselves, when they

are allowed to go to a flag of convenience by the Maritime Administration and with the arrangement by the State Department or the military or Department of Defense, there is an agreement signed with them, the company, that those ships will be returned in cases of emergency or mobilization purposes.

Mr. VAN ZANDT. Would the ship be returned fully manned?

Admiral GANO. Undoubtedly it would at the time. It would go to the nearest port and we would have to handle it from there. If it was a foreign crew we would have to do something about it.

Mr. VAN ZANDT. In the construction of a ship does the Maritime Administration provide any subsidy for built-in defense needs?

Admiral GANO. Speaking of flags of convenience?

Mr. VAN ZANDT. Yes.

Admiral GANO. No, but they do for our own American-flag ships.

Mr. VAN ZANDT. In connection with the NATO pool, in the event that the NATO pool would assign a number of ships to the U.S. organization, would it be ship and personnel?

Admiral GANO. Yes, sir.

Mr. VAN ZANDT. Who would pay for the operation of the ship?

Admiral GANO. I imagine in the case of mobilization or war there would have to be some arrangement made, and that I do not know. So many ships are assigned on a voluntary basis. Agreements have been made by the individual countries as to how many they will furnish. And then when the emergency occurs and they say "I need so many ships," it is done voluntarily.

Mr. VAN ZANDT. Is it between governments?

Admiral GANO. Yes, sir.

Mr. VAN ZANDT. In other words, if we had a group of British-flag ships, we would then have to deal with the British Government and compensate the shipping company through the British Government?

Admiral GANO. I think this would be on a voluntary basis. We supply so many and they supply so many.

Mr. VAN ZANDT. These figures here, where you say approximately 78 percent of all funds expended by MSTS for its operation for its first 9 months of 1959 were paid to various segments of private shipping—is that all U.S. shipping, or does it include the flags of convenience?

Admiral GANO. No; nothing to the flags of convenience. It includes all the U.S. shipping companies that we do business with, plus the ship repair industries, which is quite considerable.

Mr. VAN ZANDT. What percentage of business—maybe you can't answer this question—what percentage of business does this represent on the part of private shipping?

Admiral GANO. Approximately 60 percent, or a little more. It varies. For our cargo, particularly, around 66 percent of our cargo is carried in commercial shipping.

Mr. VAN ZANDT. They would really be in a bad way if we ever stopped shipping persons and——

Admiral GANO. Yes, sir. I think we utilize practically all of the passenger capability that they can give us in the summer months when the good passenger business is not much. But in the winter months we take practically all of the capability that is available to us.

Mr. VAN ZANDT. That is all, Mr. Chairman.

Mr. KILDAY. Mr. Cohelan.

Mr. COHELAN. Admiral, I am wondering how fast you can get all those ships operational that are in mothballs around Pittsburgh and San Francisco Bay, Calif.

Admiral GANO. That is a good question. We have a number of our passenger ships laid up. The reserve fleets of cargo ships are in varying stages of preservation. But we do have arranged a certain schedule, and they will come in under the various months of mobilization, as well as the months of war. Between the Maritime Administration—for their ships—and for the Navy—for their part of the Navy reserve fleets—they are spaced into the various shipyards in order to have it done.

Mr. COHELAN. We have lots of shipyards. We need ships for them. I am wondering, do you have some kind of a time estimate? I realize there are manpower requirements and skill requirements, and so on, but it seems to me there is a time factor here that is very important.

Admiral GANO. I think you are right, sir. We are concerned not only about the time factor, but also the manning factor, which would also be very important. The time factor, we think, depending on the emergency, would be given over to the transportation, if that were first, or to the cargo ships—depending upon the situation.

In Suez we gave to the tankers the first priority.

Mr. SANDWEG. Admiral Gano, I wonder what we will do with some of the wheat in those ships? Will we dump it overboard?

Admiral GANO. I understand they are doing their best under Public Law 480 to get rid of that.

Mr. SANDWEG. When you answered Mr. Van Zandt, "60 percent," was that the MSTS's providing to American-flag ships 60 percent of the American-flag ships' business?

Admiral GANO. No. Sixty percent of our business goes to American-flag ships.

Mr. SANDWEG. Could you say what percentage of American-flag ship business in the cargo field that represents?

Admiral GANO. I wouldn't be able to answer.

Mr. SANDWEG. I thought that was what Mr. Van Zandt was driving at.

Mr. VAN ZANDT. Yes.

Mr. BULL. That is roughly between 25 and 30 percent.

Mr. SANDWEG. One other question. On page 11 you indicated that there are other military claimants, including OCDM, who require ships to transport essential commodities for warmaking purposes. Does OCDM regularly or at any time make known to you what their claims on that will be, or what they presume——

Admiral GANO. Not to us, but to the Joint Chiefs of Staff. The Joint Chiefs of Staff—the OCDM make their studies as to what they need; make it known to the Joint Chiefs of Staff. In that way the total military and the civilian requirements are placed together for our total U.S. requirements.

Mr. SANDWEG. Thank you, Admiral, That is all.

Mr. VAN ZANDT. Admiral, what percentage of your overall shipping capability disappears through deterioration annually

Admiral GANO. I would say not any at the present time.

Mr. VAN ZANDT. Not any at the present time

Admiral GANO. What we do——

Mr. VAN ZANDT. Pardon me. I included in the word "capability"—both for the ships that are active today as well as those in mothballs.

Admiral GANO. You mean in the overall capability

Mr. VAN ZANDT. Yes.

Admiral GANO. I would say this: The Maritime Administration at the present time is in the process of a study of doing away with certain Liberty ships. They are disposing of them. We have what we call a group which sits down together, the MARAD—Navy planning group—and they study over each year what ships are going to be useful to count against our capabilities. Then the Maritime seeks legislation to dispose of certain ships that are not considered usable in the very near future.

Mr. VAN ZANDT. What is being done to replace what the Maritime Commission disposes of annually?

Admiral GANO. As you know, we have a ship construction bill which requires those under subsidy to renew their fleet at the end of 20 years. That is a program that is continuing. This is one where a subsidized operator may at the end of the time his 20 years is up on this particular ship will have to construct a new ship in order to retain his subsidy.

Mr. VAN ZANDT. As we dispose we replace?

Admiral GANO. That is right.

Mr. VAN ZANDT. During the course of the hearings, Admiral, we have had a witness who stated that there was a shortage of ocean ships. That is the basis of my question. Would you concur in that?

Admiral GANO. In cargo ships, I think you are speaking of; yes, sir. We will have not only initially but probably a continuing one through the ensuing months of the war. It is a shortage that can be made up possibly by this NATO pool that I was talking about, or it can be made up by trying to get ships under construction. However, the thing that worries us more than numberwise is our block obsolescence of ships, because most of our ships nowadays were constructed during the war and we are coming to that 20-year period where they must renew these ships. That is the reason that the Maritime Administration today has been trying to get appropriations, so that they can give a portion of the subsidy to construct these new ships.

Mr. VAN ZANDT. There is a problem in this particular field.

Admiral GANO. Yes, sir; there is, quite definitely, numberwise and qualitywise, I would say, particularly in our cargo ships.

In our tankers we feel better about it because the numbers of tankers that are now under construction and proposed—we feel that within a matter of 3 years we won't have to worry about our tanker, according to the requirements as specified today.

Mr. VAN ZANDT. Is it proper, Admiral, to assume that as the days go by these ships—I am thinking now of along the Hudson, St. Johns River, Jacksonville, out in the gentleman's area, of the San Francisco Bay, that they are deteriorating, and should the day arrive when we need them it is going to cost us more to rehabilitate them than it would cost us today for maintenance?

Admiral GANO. Yes; you are right, sir. I would hope that the ship elimination program that the Maritime Administration has set out to accomplish, because of excessive cost to place into service again, can be achieved at the present time.

Mr. VAN ZANDT. Are you in a position to give us a report of the progress that the Maritime Administration is making in their program?

Admiral GANO. I can furnish that. We have a study on that.

Mr. VAN ZANDT. Are you satisfied that we are making the necessary progress?

Admiral GANO. Yes, sir. I would say that we are making progress. Whether it is sufficient or not, I would not be in a position to state. This I could say: That it will depend directly upon the amount of money given to the Maritime Administration in order to renew these ships.

Mr. VAN ZANDT. That is all.

Mr. COHELAN. To follow through on that question, Admiral, some of those ships that are in mothballs have been there for quite a spell now, haven't they?

Admiral GANO. Yes, sir.

Mr. COHELAN. They are about ready to be written off?

Admiral GANO. You must remember that some of them have not been used very much. Some of them were used only a matter of a year or two, and are in pretty good shape from an engineering point of view. The trouble is that they are obsolescent. Some make only 10 knots.

Mr. COHELAN. By your own rating, didn't you say your period was 20 years?

Admiral GANO. Yes.

Mr. COHELAN. The actual life is longer, is it not?

Admiral GANO. The actual life, if it was laid up, yes; of course. But speaking of 20 years is the amount of life in operation, normal operation.

Mr. COHELAN. I press the point because those of us who live in that area, the bay area, we see the ships all the time and it looks like they are just deteriorating there.

Admiral GANO. I don't think that is quite true. The Maritime Administration maintains them. I have looked at several of them. The outside, perhaps, gives you the appearance of that. But you walk inside the ships and it is not bad. It is better than the outside looks, shall I say.

Mr. COHELAN. Thank you, Admiral.

Mr. KILDAY. Thank you, Admiral.

Our next witness is Lt. Gen. William H. Tunner, Commander of the Military Air Transport Service.

Would you prefer to speak from the table?

General TUNNER. May I, sir?

Mr. KILDAY. Yes. Just have a seat, General.

General TUNNER. May I introduce my Chief of Operations, General Birchard, and my Chief of Programing, Mr. Shea.

Mr. KILDAY. Go ahead with your statement.

STATEMENT OF LT. GEN. WILLIAM H. TUNNER, U.S. AIR FORCE, COMMANDER OF THE MILITARY AIR TRANSPORT SERVICE

General TUNNER. Mr. Chairman and members of the subcommittee, all the lessons of history have shown us that no military force is any stronger than its supply line.

Today, when our supply line circles the globe by land, sea, and air, it is particularly important to examine its operation critically. For

if it is strong, and if we have planned well, then we have nothing to fear. But if there are weaknesses, then all of us had better know about it at once.

That is why I am particularly pleased that the House Subcommittee on the Adequacy of Transportation for Mobilization has decided to hold this hearing and honored because I have been asked to discuss the position of our air transport.

You have asked for information concerning reliance that will be placed on air transportation, and plans and policies in connection with utilization of the commercial segment of the air industry. I can cover each of your questions by an explanation of both MATS and the commercial segment known as the civil reserve air fleet.

The primary mission of the Military Air Transport Service is to maintain, in being, the military transport, troop carrier, service forces, and en route bases and air routes to meet the approved wartime requirements of the Department of Defense as established by the Joint Chiefs of Staff.

The key words here are "in being" and "wartime requirements." MATS is not a plan, but a force that exists now. Neither is our operation, except incidentally, of peacetime scope. MATS is a military force-in-being, designed for war.

The wartime airlift requirements for the first 30 days of a general war are estimated by the JCS. These airlift requirements are expressed by the JCS in numbers of people and tons of cargo to the various oversea destinations. These requirements are further defined as to those which must be satisfied only by military aircraft and crews and those which may be satisfied by either military or civil aircraft and crews.

The MATS airlift capability is first applied to those most essential and immediate requirements specified by the JCS to be moved by military aircraft. The balance of the MATS capability is then applied to the remaining requirements, primarily in the cargo area. The remainder of the airlift requirements are to be satisfied by the CRAF. The cargo requirements are of such magnitude that all suitable cargo aircraft available from within the civil inventory are required in CRAF. The passenger requirements are easily satisfied by including only a small portion of the passenger aircraft available from industry.

I have discussed MATS general war responsibilities and its mission. I have also shown the dependence that we place on the CRAF to help accomplish the wartime airlift requirements of the military services. Prior to World War II we had no specific plan previously developed for the timely, efficient utilization of civil transport aircraft for direct support of military operations. As a result, time was lost and more important, potential airlift was wasted. After World War II, our Government recognized that we could not maintain in peacetime a military force sufficiently large to perform all of the airlift requirements generated during a war. At the same time we knew that from within civil air industry, there would be a large potential airlift capability which could be diverted to support the Department of Defense wartime needs.

Therefore, the Secretary of Defense vested in the Secretary of the Air Force the responsibility for planning for use of civil aircraft to support the DOD in an emergency. The Air Force, in turn, has designated the commander, MATS, as the management agency to

accomplish the planning for the efficient utilization of the civil aircraft which are required in direct support of military operations. This operation is to be under contract between the airlines and the Government. As a matter of interest, although the signing of these contracts has been a slow process to date, the first one has recently been executed. With one behind us we expected the others to be consummated more rapidly. We will use not only the 242 aircraft which have been allocated by N number, but also the existing organizations and technical knowledge of the airline industry's personnel. We plan to use these aircraft at the earliest possible date.

Activation procedures for CRAF have been worked out between the Secretary of Defense and the Director of Civil and Defense Mobilization. Recognizing that there may be a necessity to activate CRAF in situations other than that of a proclaimed national emergency, these agencies have recently developed additional measures for CRAF activation. CRAF may now be activated under the following conditions and with the following authority:

1. The Secretary of Defense can activate CRAF when the President has proclaimed the existence of an unlimited national emergency or a state of civil defense emergency.

2. The Secretary of Defense, with the approval of the Director of Civil and Defense Mobilization, can also activate CRAF during a situation short of unlimited national emergency, when military requirements dictate its use.

Commander, MATS, will receive this activation message from the Air Force. MATS will immediately release a previously prepared mobilization message directive to all CRAF carriers. The MATS–CRAF plan contains addresses for each company at which personnel are available at all times. Upon receipt of this message, each CRAF operator takes action to dispatch personnel and aircraft in accordance with this plan.

Many actions have been coordinated by the Air Force and the civil carriers and a substantial amount of money has been spent by the Air Force to insure that these civil carriers can accomplish their planned airlift requirements. Planning groups composed of the CRAF carriers and the Government have jointly developed the MATS–CRAF plan. Some examples of this very definitive planning and actions are:

The Air Force has spent over $14 million to modify more than 500 four-engine civil aircraft to make them capable for overocean operation. Some of these aircraft have been sold out of the country or lost for other reasons. As the years have gone by many of the passengers models allocated to the CRAF fleet have been replaced by more efficient aircraft.

Equipment such as navigator stations, radio sets, and navigational instruments is now stored under contract at each of the carrier's maintenance bases. This equipment will be inserted into the aircraft. But first these airplanes must get to the maintenance base and then to our aerial ports. These things, we estimate, will take 2 or more days.

Parts, spares, and equipment have been stockpiled at oversea sites at a cost of over $15 million. These spares are stored, maintained, and rotated under contract with the civil carriers.

Crew requirements have been defined by aircraft type and area of operation. The loan of Air Force navigators to companies that do not now employ them has been provided for.

The number and skills of ground support personnel which will be contributed by each company have been determined and published in the MATS–CRAF plan.

A civil carrier operations organization is established and integrated with our operations so that MATS directives can be carried out efficiently. We hold frequent joint operations meetings in preparation for the mobilization of the civil reserve air fleet.

Since the inception of the CRAF program, we in the Air Force, the Department of Commerce, and the civil airlines have continuously worked together to develop a realistic plan for the utilization of the civil aircraft. The CRAF plan is revised and published each year and amended during the year, as required. Each CRAF carrier receives and maintains copies of this plan. In addition, many of the carriers have developed their own detailed intracompany plans in support of the basic plan.

We have had two communications test exercises of CRAF readiness, one in 1955 and one in 1957; however, the airline industry agrees with us that a more detailed realistic test of CRAF readiness should be accomplished. The Air Force and MATS have been prepared to accept any proposals which the majority of the CRAF carriers believe will more realistically test the reaction time and capability of the CRAF. Working with the participating airlines, we have developed a test plan to be executed sometime next month. There was no general agreement among the CRAF participants regarding the movement of aircraft during a test. This forthcoming test will not require the actual movement of aircraft but will be the most detailed and comprehensive communications test of CRAF as yet conducted.

The Air Force has spent a total of over $30 million and years of planning to help insure that the civil reserve air fleet is ready and can be used effectively. At the same time, MATS must be ready and able to meet the vital airlift requirements which you were shown. To accomplish these tasks the MATS fleet must be able to jump immediately from its moderate peacetime utilization rate to more than double that rate in the early stages of war.

I have experienced tasks in equal proportion many times in my career—the China-Burma-India hump operation, Berlin, and again in Korea. The MATS organization is a war air transport machine which consists of management, crews, traffic, flows of supply, maintenance man-hours, and hard facilities such as docks and hangars. This machine must be ready to reach its peak immediately and sustain a high rate of utilization. It cannot be idle.

By legislative action, the MATS transport system has been created and sustained for a wartime job. While we exercise our fleet and maintain our systems in a state of readiness, we produce airlift for the Department of Defense. Use of this available airlift in peacetime makes good sense.

At the same time we know that without a strong civil industry, all of the wartime airlift requirements cannot be accomplished. This past year MATS alone spent over $71 million in oversea airlift contracts. As the Department of Defense recently testified, over $200 million was spent in a 1-year period for total airlift of people and things, both in the United States and overseas. This money has been, and will continue to be, a tremendous aid to the civil industry.

You have been shown how our forces are dependent on air transportation. We have built a wartime plan and a peacetime system around high speed delivery.

Our Nation has irrevocably tied itself internally to air transport to rapidly move supplies, equipment, and personnel. Therefore, we must not overlook the increased civil airlift requirements which will generate in addition to those airlift requirements of the military. We must prepare our military and our civil air transport industry to meet this situation. The civil industry is rapidly developing passenger airlift capability in the commercial jet aircraft. There is a need for the development of a more efficient and more economical cargo aircraft that can overfly the Atlantic Ocean and carry many tons of supplies and equipment. Only by this means can we satisfy both the civil and military airlift that will be required in an emergency.

We have in the past few years made rapid strides in our joint military-civil ability to satisfy the tremendously increased requirement for airlift in an emergency. We have recognized that a war will demand the use of all means of transportation available. Air transport has a vital role and we must be ready to meet this challenge.

General TUNNER. Thank you, sir.

Mr. KILDAY. Thank you, General Tunner. Mr. Van Zandt.

Mr. VAN ZANDT. General, in connection with CRAF, are we mothballing any of these four-engine jobs at the present time?

General TUNNER. Not that I know of, sir.

Mr. VAN ZANDT. In other words, these airlines dispose of them when they no longer have any use for them?

General TUNNER. I assume so.

Mr. VAN ZANDT. As these airlines expand their equipment, that is, through the additional airplanes, that means a greater lift capability for CRAF; am I right to assume that, or is the agreement that you have with them based on a certain number of ships that they can make available?

General TUNNER. The augmentation is primarily in the passenger field, where we don't have the requirement.

Mr. VAN ZANDT. The cargo lift that you have available, I imagine it comes from lines like the Flying Tigers, and so forth?

General TUNNER. That is right. Slick, Flying Tigers, Seaboard, and Western.

Mr. VAN ZANDT. That field is expanding daily, is it not?

General TUNNER. Yes, sir; there are more of them. But the aircraft that they are using are not a new type of aircraft, generally speaking. They are the aircraft which the airlines, the major airlines, have had, and which they have sold or disposed of.

Mr. VAN ZANDT. In my capacity as a layman, I wonder if you can answer the question: What is the life of a four-engine prop job?

General TUNNER. We estimate 8 years. However, we have some that are much older than that. As a matter of fact, the special mission fleet which we have stationed at the National Airport, most of the aircraft are 10 or 11 years old.

Mr. VAN ZANDT. Those are the Connies?

General TUNNER. Yes, sir.

Mr. VAN ZANDT. Just off the record——

(Statement off the record.)

Mr. VAN ZANDT. General, are you satisfied with the progress we are making with CRAF?

General TUNNER. I think we did not make progress for several years. But I think in the past few months we have had considerable

progress. We have had two contracts signed. We are on the verge of having others signed.

Mr. VAN ZANDT. How many contracts are signed now?

General TUNNER. Two.

Mr. VAN ZANDT. You anticipate others will come in?

General TUNNER. Yes, sir.

Mr. VAN ZANDT. Does it involve any jet aircraft, such as the 707?

General TUNNER. Yes, sir.

Mr. VAN ZANDT. What about personnel? Are you satisfied in the event of an emergency, as we gradually recover and build up a big effort, do we have time there to train the necessary personnel to man the program that is represented by your presentation here this morning?

General TUNNER. I don't think we have time to train anyone. I think we are going to fight with what we have available, and the decision will be made with the people who are available on H-hour.

Mr. VAN ZANDT. Do you think, then, on that basis, with the personnel available, that we can man the program that you have in mind?

General TUNNER. Yes, sir. We have carefully calculated MATS' capability to surge. Today our people are working normal working hours. On H-hour everyone goes on a 24-hour day, 7-day-a-week program, and I am sure people will be working 14 or more hours a day, if necessary. That is where we accomplish our surge.

Mr. VAN ZANDT. This contract that we have with these companies, is it so constructed that it gives you the authority, as a military man, to take over this civilian effort and put them on an unlimited daily basis?

General TUNNER. We will tell the corporation what we expect of it, the number of sorties, the number of hours, and, of course, we know the number of airplanes. We will also determine where they go. How they manage internally, we don't pretend to get into that. We expect them to do the job that we give them, and let them manage their own internal problems.

Mr. VAN ZANDT. Is the Air Line Pilots Association part of this effort, CRAF?

General TUNNER. Well, of course, many of the pilots belong to that association, and I dare say some of them don't.

Mr. VAN ZANDT. Just off the record.

(Statement off the record.)

Mr. KILDAY. Suppose a civilian crew of a craft didn't want to make the sortie or mission?

General TUNNER. All he would be doing would be revoking his contract.

Mr. KILDAY. You have no way to order him to go?

General TUNNER. No way.

Mr. KILDAY. You feel most of them would go?

General TUNNER. I feel most of them would go; yes, sir.

Mr. VAN ZANDT. Just off the record again.

(Statement off the record.)

Mr. VAN ZANDT. That is all.

Mr. KILDAY. Mr. Cohelan.

Mr. COHELAN. I am wondering, General, about this airfreight cargo gap. I asked this question of General Morris the other day

and I now ask you: Would it be your opinion that we ought to follow the suggestion of the Smathers committee that the Government go in and subsidize some of our private companies with this air cargo materiel, in order to kind of close the gap, and simultaneously to encourage the industry?

General TUNNER. There is no question but we have a gap. Whether it should be done by subsidy or other means I am afraid I wouldn't be qualified to make the statement.

Mr. COHELAN. You are aware of the fact that this is being considered?

General TUNNER. Yes, sir.

Mr. COHELAN. The gap is fact, and we have to concern ourselves with the gap.

General TUNNER. Yes, sir.

Mr. COHELAN. The other question that occurs to me is the business about supply. Since I have been on this committee I have been reading some material in your field, and it worries me about the demands, the enormous demands, particularly of jet aircraft, and as we phase into jet aircraft how can we be sure that we will have adequate fuel supply to keep everything cranked up?

General TUNNER. All of our war plans require a stockpiling of POL at all of the en route stations, and we maintain a level adequate to carry out our our plans.

Mr. COHELAN. This is for the military requirement?

General TUNNER. It is also for the commercials, also for the CRAF.

Mr. COHELAN. As the commercial organizations go into jet aircraft, what, to your knowledge, is happening to the four-engine gasoline jobs, prop jobs?

General TUNNER. I think some of them are appearing on the market, but I don't know.

Mr. COHELAN. I notice in your testimony you said here that the Air Force spent $14 million to modify more than 500 four-engine civil aircraft to make them capable for over-ocean operation. Then you go on to observe that some of them have been sold out of the country. Is this good?

General TUNNER. Most of the aicraft that are sold out of the country are of the C–54 type and they are not very efficient on the long run. They take a lot of maintenance. Many of them have been cracked up. As to whether it is good or bad, I think that requires a weighing by people other than myself.

Mr. COHELAN. Would it be fair for me to assume, General, that their utilization potential is marginal?

General TUNNER. Their utilization would be marginal because they are a type that wouldn't be too useful to us. This program has been going on for many years. That is why the money was spent on so many aircraft, although we now only have 242.

Mr. COHELAN. Are we continuing this operation with other such phased-out aircraft? I am thinking of four engine.

General TUNNER. Yes. Next year we will have a different number of aircraft, based again on the war plans, and the number will be decreased because the type of aircraft that will be provided will be larger and more efficient.

Mr. COHELAN. I am wondering about the question of obsolescence. This is a continuing program, and at present levels when do we phase these out and rework the program with new material?

General TUNNER. You mean the military program?

Mr. COHELAN. Yes.

General TUNNER. As you may know, the Department of Defense, I think, and the Bureau of the Budget, all approved and submitted a request for $53 million to start the modernization of our military fleet. So far as I know, to date both the House and the Senate have not seen fit to approve this proposition.

Mr. KILDAY. That is in neither version?

General TUNNER. That is right.

Mr. COHELAN. General, it seems to me, as a layman, that it is pretty clear we are moving into the jet period militarily. To me it would seem we are there. Assuming our war plans, what happens if tomorrow we have to start landing jets in some of these airports? There is going to be an awful jam; isn't there? I am thinking now in terms of MATS and the overall picture.

General TUNNER. MATS has only three jets. They belong to our special mission fleet. They are the type that carried the Vice President to Moscow. They are not part of our strategic fleet. They are equipped to carry the President and the Vice President, Cabinet members, Members of Congress, and ranking officers only. That is their function.

Mr. COHELAN. General, does this mean that we are not going to have a MATS organization with jets?

General TUNNER. We are doing some modernization, but we have no jet aircraft in the currently approved program. We are modernizing it to a degree, because we are buying presently the C–133.

Mr. COHELAN. Is that a turboprop?

General TUNNER. Yes. It is a very large airplane. There will be a total of 50 in the inventory, in the military inventory.

Mr. VAN ZANDT. Are they cargo?

General TUNNER. Yes, sir, purely.

Mr. KILDAY. I think we can do better if we kind of have a round-table. Is there any money in this year's budget for that?

General TUNNER. None in the budget. The 50 have been budgeted for in previous years.

Mr. KILDAY. There were none included in this year's appropriation by either House?

General TUNNER. There was no money for aircraft for MATS that I am aware of as passed in the bills that were passed by the House and Senate.

Mr. KILDAY. Did you appear before the Appropriations Committee?

General TUNNER. I did not, sir.

Mr. KILDAY. You did not?

General TUNNER. No.

Mr. VAN ZANDT. Were these ships involved in the block of jets that were requested in the appropriation for fiscal 1960?

General TUNNER. Yes, sir.

Mr. KILDAY. How much money is that?

General TUNNER. It was asked that we begin the modernization with $53 million. I believe that is the figure.

Mr. VAN ZANDT. How long would it take you to implement the program if the money was appropriated and the program funded and released by the Bureau of the Budget?

General TUNNER. The modernization of MATS should be a continuous thing that goes on year after year. I don't think that any attempts should be made to try to modernize it all at once.

Mr. SANDWEG. Did you mean, Mr. Van Zandt, to modernize that portion that would be involved in the SAC strike?

Mr. VAN ZANDT. Yes.

Mr. SANDWEG. That which was involved in support of the SAC strike.

General TUNNER. We would have gotten the airplanes in the last part of 1961. We asked for 10 airplanes, $53 million.

Mr. COHELAN. As far as our airports are concerned and our European bases; in fact, our world bases, we can get everything down, can we, in relation to the strips, and so on?

General TUNNER. Yes, sir.

Mr. COHELAN. I am going to ask a question that has intrigued me ever since the Navy very kindly took me out to *Saratoga*, where I witnessed operations. Why can't we land a jet on a land-based field the same way—the way they land them on an aircraft carrier?

General TUNNER. You mean with an arresting gear?

Mr. COHELAN. Yes, sir.

General TUNNER. Of course, I probably should defer to one of my Navy colleagues here for the reply to that question. But obviously, the carrier itself is proceeding probably at 30 knots and cuts off a considerable amount of the speed. Sir, that is not in my line. I don't think I can give you a good answer.

Mr. SANDWEG. Could I make one point, Mr. Kilday?

General Tunner, since only two contracts for CRAF have been signed to date, what is the big stumbling block?

General TUNNER. It has been a question of getting together on many things, mostly the money that would be paid per ton-mile, the profit, and the ton-mile costs of operation.

Mr. SANDWEG. If D-day were tomorrow, do you believe that those CRAF operators presently unsigned would go ahead with what was planned without the benefit of the civil contract? In other words, would they be ready to participate in the presently envisioned CRAF program?

General TUNNER. I think they would.

Mr. SANDWEG. One other question on this air cargo plane. I noticed in the paper the other day that Seaboard & Western and Flying Tigers, I believe, have contracted to purchase some 15 of these cargo planes from Canadair.

General TUNNER. Yes, sir.

Mr. SANDWEG. Is that the type of cargo plane that would be envisioned, or perhaps an addition to the commercial fleet in this country? Is that sufficient for the purposes needed right now?

General TUNNER. I think they call that the CL–44. It is a Canadair plane. I think it is a turboprop. It should be a good airplane, from all I know of it. I know that many companies in this country have plans to make cargo aircraft. I have seen many proposals submitted for different types of cargo aircraft. I noted that one company was planning to buy some of the Lockheed GL–207's, I believe they call it. It is an advanced C130–B.

Mr. SANDWEG. Is their reluctance due to the fact that there is not sufficient commercial business now to warrant that investment?

General TUNNER. I would say, to my personal knowledge, that the high cost of moving airfreight is one of the factors which prevents the development—the more rapid development of the airfreight industry.

Mr. SANDWEG. Since we have just about reached the point in air cargo business that it costs too much to transport most commercial products by it, that we must decide which comes first, the chicken or the egg; is the business to be there or must we produce the planes to stimulate the business. Could you suggest anything that can be done outside of the Government actually producing such a plane or putting in the initial investment, since air cargo is going to be the real critical shortage, can you suggest anything that might be done to stimulate this?

General TUNNER. I have recommended in the Department of Defense that a greater percentage of our people and our high-cost cargoes move by air. For example, the Air Force moves, I believe 96 percent of all its people overseas by air; that is, airmen, officers, civilian employees and dependents. The Air Force also moves many of its high-cost items by air. I think when and if we get general acceptance of this philosophy—there may be good reasons to mitigate against this—but if we get general acceptance, I think there will be more business. And I think that we in the Department of Defense will be pointing the way.

But the people in commercial industry, I think, are willing and ready to ship more things—as you reduce the ton-mile cost each penny down to where it gets closer to the surface rates, so that there is real promise as aircraft develop and as the ton-mile costs are reduced, to increase cargo airlift.

Mr. SANDWEG. You feel if the Government would start to utilize more of this type of equipment that we are going to need, that they might thereby generate the business which would stimulate the industry to construct the very thing that we are going to need, the cargo plane, to a greater extent?

General TUNNER. I think it would, to a degree, because we in MATS, as I mentioned, fly 5 hours per day per aircraft, and we have a limitation of 1,500 million ton-miles annually. So that as we get new aircraft we reduce our number. But as more Department of Defense business generates, MATS military aircraft would not pick it up, it would go, therefore, to the commercial world and help develop their business. I don't think, though, that is the way. I think the way for the commercial people to develop their business is to get out and sell it.

Mr. COHELAN. Isn't it true, General, that there is a limit of markets in relation to this cost factor, and what you are suggesting, really is that the market be enlarged to include a substantial portion of Government business?

General TUNNER. I think that is more the philosophy that we have had in the Air Force—I think that there is more Government business, a potential of more Government business available.

Mr. COHELAN. You do feel, or do you, that with a more aggressive program on the part of the commercial operators, that perhaps they might expand their market?

General TUNNER. They have expanded it very substantially. I don't know what the figures are, but I may have some here to give

you an idea of how this airfreight business is booming. It is one of the most rapidly growing businesses we have in this country.

Do you have that?

Mr. KILDAY. We had some figures here yesterday that indicated 90-some percent of the airfreight is carried in passenger planes——

Mr. SANDWEG. Seventy-five percent.

Mr. KILDAY. And only the smaller percentage in cargo planes. This is just an adjunct to the carrying of passengers.

Mr. VAN ZANDT. All you have to do is read these airline schedules, as they come out from time to time, and you will see the addition of cargo flights. I have noticed it over a period of years now that they are all adding cargo flights, which they never did before.

General TUNNER. As I say, as they improve their service, get better equipment, and reduce thereby the ton-mile figure, there would be a tremendous capacity available. I don't think it will ever give any concern to surface operators. As Mr. Donald Douglas mentioned recently at the Defense transportation meeting, he said, after his research, that one-thirtieth of 1 percent of cargo moves by air. So if you were to increase it by 3,000 percent you would have only 1 percent.

Mr. KILDAY. Do you presently provide aircraft for Air Force personnel going overseas, General?

General TUNNER. Yes, sir.

Mr. KILDAY. What percentage of the Air Force personnel going overseas is now carried by air?

General TUNNER. Ninety-six.

Mr. KILDAY. How recently did it step up to 96 percent?

General TUNNER. Recently.

Mr. KILDAY. Wasn't there a decision in the last few weeks that you would no longer use MSTS?

General TUNNER. I know of none.

Colonel HEDLUND. We inaugurated a program about 3 years ago which was designed to eventually move the majority of our personnel to and from overseas by air in the interest of saving man-years and transportation dollars. In fiscal 1959 we have reached what we consider to be the maximum wherein we moved about 95 percent by air, the residual by MATS.

Mr. KILDAY. Perhaps I had just seen that figure of 95 percent and thought it was something new. What is your cost on your troop rate at MSTS?

General TUNNER. We have the world divided into six areas and the rates are different in each area. But we have a general figure.

Mr. KILDAY. I wanted something to compare with MSTS of $70 from New York to Bremerhaven.

Mr. BULL. That is $55.

General TUNNER. That is for the troop——

Mr. KILDAY. $169 for dependent or cabin passenger——

General TUNNER. The same to our customers for all people. I mean officers, or airmen or dependents. I think our figure—from the east coast to Bremerhaven, our tariff rate is $109. That is for everyone.

Mr. KILDAY. Are there any further questions of General Tunner at this time?

Mr. VAN ZANDT. I would like to ask the general a question. First, I want you to know that I am disturbed about the lack of

modern aircraft to support this SAC mission. Why didn't you appear before the House Appropriations Committee?

General TUNNER. Sir, I wasn't asked.

Mr. VAN ZANDT. Are you convinced that the House Appropriations Committee were given the facts by someone else?

General TUNNER. I haven't read the proceedings, sir.

Mr. KILDAY. I doubt that they were if it wasn't in the budget.

Colonel HEDLUND. Yes, sir. Congress was presented the facts along with the proposed mission for the 10 jet aircraft which we had in the fiscal 1960 program. These were presented along with all of the other justifications for the dollar budget.

Mr. VAN ZANDT. In the support of the SAC missions, is it not true that these aircraft that you are requesting not only carry personnel and spare parts, and so forth, but would they not carry weapons in some instances?

General TUNNER. I couldn't say exactly what SAC is going to put in our airplanes.

Mr. VAN ZANDT. I am drawing now on information that I have from another committee, the Joint Committee on Atomic Energy. This thing disturbs me. I can't believe that the House Committee on Appropriations would say no to a request like this.

General BIRCHARD. How they use these aircraft is up to them. It may carry personnel, supplies and equipment and engines for the aircraft, or it may carry whatever they may decide it will carry during that period of time.

Mr. VAN ZANDT. I used the term "weapons" very generally because, as you know, they are employing special weapons and there are certain things you have to have there to make them effective.

Mr. Chairman, my suggestion here would be, after we have concluded our agenda of witnesses, that we spend a few minutes and get all the details of this problem so that if there is some misunderstanding we can correct it. I couldn't leave Washington with this Congress adjourning unless I was convinced we were supporting the SAC mission with this support aircraft.

Mr. KILDAY. I was going to remark that these hearings were called and designed as a study. Your statement has given us something to study about, General. We understand, of course, the situation in which you, as a military man, find himself in coming here. We have not overlooked a number of statements that we have underlined here. It will receive a good deal more study in the course of our proceedings here.

If there is nothing further, we will stand adjourned until 10 o'clock, Wednesday of next week.

(Whereupon, at 12:03 p.m., the subcommittee adjourned, to reconvene at 10 a.m., Wednesday, July 29, 1959.)

43755—59——14

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

WEDNESDAY, JULY, 29, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10:10 a.m., Hon. Paul J. Kilday (chairman of the subcommittee) presiding.

Mr. KILDAY. The committee will be in order.

We will resume our hearings this morning. The purpose this morning of the hearing is to hear testimony of carriers, particularly air carriers. We have with us Mr. George Dregge, Chief of Routes Division of the CAB, and Mr. Harold Sanderson, Assistant Director of Air Operations, who will not be called as witnesses but are available if any questions come up or for any information we may desire from the CAB.

We appreciate your coming and making yourselves available to us.

Our first witness this morning is Maj. Gen. Marcus F. Cooper, Assistant Administrator for Plans and Requirements, FAA. General Cooper, will you come around?

General COOPER. Mr. Chairman and members of the committee——

Mr. KILDAY. Wouldn't you like to have a chair?

General COOPER. I am going to use these charts——

Mr. KILDAY. Whichever way you prefer.

General COOPER. I have two prepared statements to submit for the record.

One is a copy of a statement submitted to the Holifield committee in May which put forth the concept Mr. Quesada has regarding aircargo.

The other statement is a statement regarding adequacy of the Federal Aviation Agency's air traffic control system in the event of war or mobilization.

These are being submitted for the record. The first statement was made by Mr. Quesada before the Holifield committee on the 14th of May.

Mr. KILDAY. Without objection that will be included in the record at this point.

STATEMENT OF FEDERAL AVIATION AGENCY'S POSITION ON THE CREATION AND OPERATION OF A NATIONAL AIRCARGO FLEET

PREFATORY STATEMENT

The aircargo industry is a new and very promising industry. While cargo has been carried by air for some time it has seen relatively little growth as a new industry.

One reason for the limited development of this potentially important capability has been the lack of dynamic leadership and incentive on the part of certain elements of the aviation community.

In the military, development of all-cargo aircraft has been very modest and understandably so. Money spent by the military for support aircraft means correspondingly less money for the procurement of extremely expensive and essential combat weapons systems.

In the commercial field, preoccupation with the development and acquisition of new passenger turbojet airliners has resulted in a similar lack of interest in the development of an uncompromised all-cargo aircraft. As a result, the cargo capability now employed outside the military exists in the form of improvised modifications of passenger-configured aircraft. Thus operating costs have remained high with the attendant high ton-mile cost to the user of aircargo facilities.

The characteristics of an uncompromised cargo aircraft are unique and differ importantly from the characteristics of a passenger aircraft. This difference is not unlike the difference between a bus and a truck or the difference between a pullman car and a freight car. Adaptation of essentially passenger-configured aircraft to cargo capability results in high direct operating costs, unnecessary and high handling charges and inflexibility as to operating bases and facilities.

It is our belief that the development of a truly capable all-cargo aircraft designed and developed from the outset, would be a constructive undertaking. This would, we believe, permit an aircargo industry to develop, operate and be self-supporting.

The present state of the art in airframe and engine development leads us to believe that the application of known techniques, under dynamic leadership, could produce an optimum cargo aircraft in the near future.

For example, an advanced turboprop or turbofan engine married to an airframe employing the boundary layer control principle may well produce such an aircraft. Existence of a really efficient aircraft will result in the dynamic growth of a healthy, self-sustaining aircargo industry. I will treat the implications and application of a national aircargo fleet in the following conceptual brief.

CONCEPT

The following represents the considered views of the Federal Aviation Agency regarding the need, the concept of operation of, and the necessary courses of action leading to creation of a capable, responsive, and economical national aircargo fleet.

The Federal Aviation Agency has adopted the premise that it would be in the national interest of the United States to have an efficient and effective aircargo fleet as an extension of national policy. We believe that the creation of such a fleet would, at this point in time, serve national policy essentially as the maritime service has served national policy in the past, and as it continues to do today. The maritime service application in fields of national interest could, we believe, be importantly augmented by a global commercial aircargo fleet. We believe that such a fleet in being would have favorable influence on all elements of national power, i.e., economic, military, psychological, and political.

In support of this contention, the following represents our view regarding the applicability of a national aircargo fleet to the elements of national power in support of our established national objectives.

MILITARY

The United States does not now have a capable, effective, economical, and responsive air logistics capability to support military operations in a limited war situation. The present military transport capability is marginal to the needs and is obsolete. The bulk of the heavy transport capability is represented by a decaying fleet of C–124's, the life expectancy of which is very short.

The lack of production of C–124 engines in itself limit the useful life of this fleet to the immediate future. The only followon modern airlift potential to support a waning C–124 capability is to be found in the projected procurement of 50 C–133 aircraft, of which approximately one-half are currently in the inventory. Support aircraft under military procurement have historically suffered because of the direct competition with combat weapons systems procurement. This condition has created the obsolete military transport capability which we have today. The sophisticated firstline weapons systems of today and tomorrow strongly suggest that the support aircraft requirements will continue to be plagued by a very low procurement priority.

It is our conviction that an effective cargo fleet responsive also to pure military requirements can be generated outside the military budgets, thus avoiding the direct competition with weapons systems, which condition guarantees an inadequate cargo support fleet.

We contend that the military cargo fleet should be limited to the so-called hard-core requirements, that is, military cargo aircraft used in direct support of the execution of military emergency war plans. It follows that routine cargo support could be provided from outside the military in both peace and war. This presumes that the military would have guarantees that the national cargo potential, when achieved, would be instantly and wholly responsive to the military needs, on a timely basis. An essentially commercial cargo fleet would, in the interim, support itself without representing a substantial tax burden with our economy deriving benefits from its day-to-day operation.

ECONOMIC

The Federal Aviation Agency believes that the economic implications of an in-being national cargo fleet are most significant.

As of this date, one aircargo operator is finalizing an arrangement with a Canadian aircraft manufacturer to purchase up to 15 all-cargo aircraft. This aircraft is an advanced turboprop design which will have the capability of supporting 3.5 cents per ton-mile direct operating cost and a user cost of approximately 10 cents per ton-mile. This rate is not only competitive with other modes of transportation but is significantly lower than any cargo aircraft currently under development in the United States. The guaranteed efficiency of the airplane coupled with a Canadian Government loan guarantee up to 80 percent of the investment will constitute a technical and financial breakthrough of national consequence.

There appear to be several very important implications in this program. The creation and manufacture of this extremely efficient and capable aircraft by Canada emphasizes the progressive attitude of the Canadian aircraft industry. The operational success of this aircraft will place Canada in an enviable position in the cargo industry throughout the world. The potential aircargo market will, we believe, "explode" immediately after the introduction of this aircraft.

The U.S. policy of assisting in the development of the underdeveloped areas of the world requires our achieving a similar capability. Most of the underdeveloped areas remain underdeveloped because of lack of adequate transportation systems. The aircraft, operating in a medium that is common to both sea and land appears to be one really feasible way of aiding in the development of those areas with minimum capital outlay.

PSYCHOLOGICAL AND POLITICAL

The economic considerations noted above will have a bonus effect in the area of the psychological competition for uncommitted areas of the world.

U.S.-flag carriers unlike surface or sea transportation can operate in the most remote areas of the globe. Supply missions, mercy missions, and similar beneficial psychological efforts could be facilitated by the existence of a national aircargo fleet with a global capability.

Underdeveloped and uncommitted countries are without exception most susceptible to access by air. This is patently not so with other means of transportation. The State Department's efforts in this field may well be assisted by a global aircargo capability. Routine commercial intercourse and show-of-flag activities would undoubtedly enhance the prestige of the United States in these areas which, as a matter of national policy, we desire to orient toward free world aspirations. This capability alone may justify the creation of this global airlift capability.

Underlying the national and international benefits which would accrue to the United States as a result of the operation of a global aircargo fleet is the fundamental technological breakthrough which would permit expansion of our own national economy.

The Post Office Department continually seeks a more efficient mail distribution system, responsive to the tempo of today's society. Fast reaction time is essential to the postal system. It goes without saying that the Department also wishes to accomplish this in the most economical manner.

In summary, the creation, operation, and application of the potential of a truly economical and capable global cargo fleet would provide a national resource that could be placed in direct support of national policy in both the domestic and inter-

national fields. We are at present in a most unfavorable position in both the design and manufacturer of a true cargo aircraft capable of producing low ton-mile cost to the users.

It behooves the U.S. Government to stimulate by the most appropriate means the development of this capability. It appears likely that given the development of a suitable aircraft, minimum Government activity and maximum private enterprise could produce the required capability at the least cost to the taxpayer and greatest benefit to the Nation's economy and welfare.

We feel that with the exception of certain outsized, and sensitive cargo, the characteristics of most routine military cargo are compatible with commercial cargo. We are currently attempting to establish the degree to which this is so. If, as we suspect, the bulk of military and commercial cargo is more or less common as to characteristics—dimensions, weight, and density—joint selection of a capable aircraft would be facilitated.

As we view it, the availability or development of a really economical and uncompromised all-cargo aircraft adaptable to the common military and civil needs, is the key to this program.

In this respect we are developing, in cooperation with the Department of Defense, Civil Aeronautics Board, Department of Commerce, Post Office Department, and industry, the characteristics of an optimum cargo aircraft.

We have also met with representatives of both the Department of Defense and the National Aeronautics and Space Administration and have adopted procedures which we hope will lead to the joint development of the operational requirements of an all-cargo aircraft.

In general terms, the range and flexibility of such an aircraft would need to be such as to permit global operation without use of intermediate island bases, be capable of operating from small unsophisticated airports, employ a minimum of high cost and high maintenance integral systems, and capable of being routinely operated at a direct operating cost of 3.5 to 4 cents per ton-mile. This latter capability would provide aircargo service to the user at about 10 cents per ton-mile. This is considered to be a very economical aircargo charge.

Interview with one successful aircargo operator suggests that if an aircraft of this capability with a cargo capacity of approximately 75,000 pounds payload were to become available, many commercial operators would purchase and employ the aircraft without delay.

We believe the National Government should participate in the program only to the extent absolutely required to make the creation and operation of a national aircargo fleet possible. We are proceeding with our studies on this basis.

We hope to be able to show that a common national aircargo fleet operated by commercial carriers could serve the needs of both the military and commercial users in peace and war and at the same time be essentially self-sustaining.

We anticipate that Government assistance in the area of guaranteed loans and perhaps in contribution to development costs of a suitable aircraft would be all that would be needed to assure the healthy creation and operation of a national aircargo fleet with the ability to foster national objectives on a global basis.

Mr. KILDAY. Then the second statement——

General COOPER. The second statement is the statement regarding adequacy of the Federal Aviation Agency's air traffic control system in the event of war or mobilization.

Mr. KILDAY. Without objection that statement will be included in the record.

(The document referred to is as follows:)

STATEMENT REGARDING ADEQUACY OF THE FEDERAL AVIATION AGENCY'S AIR TRAFFIC CONTROL SYSTEM IN THE EVENT OF WAR OR MOBILIZATION

Under the Federal Aviation Act of 1958 the Administrator of the Federal Aviation Agency is responsible for establishing, operating, maintaining and improving the common civil-military system of air traffic control, aeronautical communications, and aids to air navigation. One of the Agency's principal responsibilities in support of a national defense effort derives from its role as the proprietor of this common civil-military system and the requirement for insuring the continuous operation of the system during war or national emergency.

The Federal Aviation Act of 1958 directs the Administrator of the Federal Aviation Agency in the performance of his functions to give full consideration to

the requirements of national defense. Pursuant to this policy directive in the act, the Federal Aviation Agency attempts, to the extent permitted by its resources, to insure maximum possible effectiveness and continuity of its operations in support of military air operations during an emergency and postattack civil-military survival operations.

By virtue of a series of agreements between the Department of Defense and the Federal Aviation Agency (or its predecessor organizations), the Agency is committed to performing continuously throughout a preemergency attack or postattack period a variety of supporting services that include, among others, the following specifics:

Full operation of the Federal airways system at maximum effectiveness;

Expeditious and effective execution of plans for security control of air traffic;

Full aircraft movement information service from FAA air traffic control facilities to Air Defense Command facilities;

Expeditious air traffic control service to air defense missions and fighter-interceptor aircraft;

Effective operation and maintenance of joint civil-military radar facilities;

Expeditious transmission of reports on vital intelligence sightings to appropriate military headquarters;

Positive and expeditious identification of inbound aircraft over oceanic areas;

Operation of the Central Altitude Reservation Facility (CARF) to coordinate airspace reservations;

Operation of certain military radar approach control facilities;

Providing ground-to-air communications for military flights;

Transmitting aircraft movement messages for military flights originating at places other than military bases; and

Giving military users access to and use of FAA teletypewriter systems during emergencies.

Operational plans for these various military defense support activities are kept in a high degree of readiness. They are given continuing attention. If not currently in operation, they are periodically tested. The conditions of modern warfare dictate a volume and type of peacetime military flying, training, and surveillance activities that place many of FAA's wartime activities on a currently operational basis. When required by changing circumstances they are modified and revised in collaboration with the Department of Defense.

To insure that the Federal Aviation Agency operating under wartime conditions can acually fulfill its civil-military responsibilities is a matter of the most serious concern to the Agency. This concern involves three principal elements:

(1) the trained manpower required for effective wartime operations;

(2) the capacity of the air traffic control system; and

(3) the physical preparations necessary to making uninterrupted operations possible under attack or postattack conditions.

The Federal Aviation Agency's wartime manpower problem is essentially that of having an adequately trained force in being that can be relied upon to respond effectively to vital wartime requirements. In view of the speed and destructiveness of warfare today, the Agency must be prepared to act effectively, at once, and without interruption if an attack should come. Many of the positions involved in the military support activities already described require as much as 2 years of training and experience that can be obtained only within the Federal Aviation Agency. Therefore, arrangements must be made to insure retention of this manpower in time of war or national emergency. Such action must also insure the Administrator's capability of deploying personnel where and when necessary for the national defense and must provide appropriate physical and legal safeguards for the protection of employees who are required to accept military support duties that cannot be interrupted despite personal risk or special hazard.

In recognition of the essentiality of the air-traffic-control function in an emergency, the FAA is in the process of preparing legislation that will insure availability of the very specialized personnel required by the Agency in all types of emergency situations. The need for such legislation has been recognized by the Congress, which has directed that it be submitted for congressional consideration not later than January 1, 1960.

The Federal Aviation Agency is conducting a vigorous research and development program and, based on this research and development program, is completely modernizing the Federal airways system and its traffic capacity. In the period before programed improvements can be completed and particularly in the period before the benefits of the newer computers and integration with the Air Force's SAGE program can be realized, defense needs in an emergency can be met only

through the use of extreme measures. For example, a general war emergency at this time would place such loads on the traffic control system that almost all civil flying and nontactical military flying would have to be stopped immediately upon the onset of such an emergency with reintroduction of civil flying on an airspace available basis.

Notwithstanding the major importance of civil air transportation to the overall mobilization effort, if a serious national emergency should occur now the Nation's air traffic control capacity would have to be reserved largely for urgent military needs. In a period of mobilization before expected general war, in a limited war, or in any other situation in which military air combat actions will not actually occur in great volume, civil aviation could continue in concert with greatly increased military support flying and tactical aircraft repositioning; however, such a situation could be handled within the current air traffic control capability only by departing from desirable separation criteria and through the use of priorities that are neither normal to the system nor productive of the greatest overall efficiency.

The FAA modernization program is designed specifically to remove such deficiencies, as well as to keep pace with the rapid growth of civil aviation. This program provides, in effect, for the automation of the entire air traffic control system. Its major features include en route traffic control centers collocated and functionally integrated for purposes of economy, efficiency, and invulnerability with the Air Force's SAGE system. The second major element in the modernized air traffic control system is the transition-terminal traffic control facility, which is a radar-supported, highly sophisticated facility handling the great volumes of air traffic surrounding major hubs. A typical intercity flight will involve, first, a controlled departure handled by the transition-terminal facility servicing the area in which the flight originates; second, control by an en route traffic control facility for the middle portion of the flight; and finally, a controlled approach at the destination handled by the transition-terminal facility serving that area.

It is the goal of the FAA to provide eventually for total control of all aircraft at the higher altitudes. The speeds of aircraft operating at the higher altitudes are such that, with a growing volume of such traffic, the long-used rule of "see and be seen" will not provide an acceptable degree of safety. At lower altitudes the transition-terminal facilities will provide very much greater traffic capacity in all weather conditions. In addition, transition-terminal facilities will handle the clear air situation on a much more systematic basis and provide a much greater amount of radar advisory information to pilots flying under visual rules.

The Federal Aviation Agency has underway an extensive program for reducing the vulnerability of the air traffic control system to damage in the event of a nuclear attack and for insuring, insofar as possible, the continued availability of effective air traffic control under any condition of national emergency. The new transition-terminal control facilities, which in the current state of the system's development will also serve for a period of time as en route centers, are being dispersed outside areas of probable blast damage and are being given radiological defense protection. This program is underway, not merely planned. The en route traffic control centers that are being collocated with SAGE will have the same protective construction as the SAGE centers at the same locations. Therefore, most of our air route traffic control centers will receive protection effective against almost any strikes, other than direct hits.

As these basic improvements in the wartime capability of the air traffic control system are realized, the Agency must take appropriate action to insure the adequacy of its communications capability under various degrees of emergency; to stockpile and pre-position supplies, equipments, and other items required for use under emergency operating conditions; to provide radiological protection in existing buildings used for essential wartime operations; and to reduce the vulnerability of air traffic control, aeronautical communications, and air navigation aids to disruption through any type of enemy action, whether overt or covert.

Although many of the Agency's emergency readiness preparations are undertaken with specific military support responsibilities in mind, their application to the civil aviation aspects of mobilization and defense are not overlooked. Indeed, under any condition of mobilization, civil air transportation would be a critical element in the Nation's war effort. Should a direct nuclear attack on the United States ever materialize, air transport would play a decisive role in civil survival operations. Air transportation systems would be much less severely disrupted by the physical and radiological effects of a nuclear attack than would surface transport systems. In an immediate postattack period (when the radiological hazard would be greatest and most widespread), it would be of the utmost im-

portance to maintain maximum effectiveness in facilitating the flow of civil air traffic required for relief and rescue missions. The expeditious and timely movement of subsistence items and basic supplies could, in fact, determine whether large numbers of our people would survive an attack.

In this connection, it should be specifically noted that the preparations made by the Federal Aviation Agency for direct military support in the event of a national emergency will also enable it to discharge its responsibilities for the support of essential civil air movements. The Agency's objective is to develop a compatible environment in which all aircraft, regardless of mission, can be safely and efficiently accommodated.

TESTIMONY OF MAJ. GEN. MARCUS COOPER, ASSISTANT ADMINISTRATOR FOR PLANS AND REQUIREMENTS, FEDERAL AVIATION AGENCY

General COOPER. My presentation is from charts. It corresponds generally to the statement made by Mr. Quesada before the Holifield committee.

The subject is aircargo. We have since the inception of FAA on January 1 this year been looking at the cargo situation in accordance with the directives contained in the Federal Aviation Act. The Administrator is empowered and directed to encourage and foster the development of civil aeronautics and air commerce in the United States and abroad.

(2) The Administrator is empowered to undertake or supervise such developmental work and service testing as tends to the creation of improved aircraft, engines, propellers, and appliances.

As a result of about 6 months of active investigation we have arrived at two premises: First, a capable economical aircargo industry is a significant national resource necessary to support all elements of national policy.

Second, the development of a capable aircraft is a main prerequisite to a healthy and productive aircargo industry.

The FAA objective is to cause to be developed policies and programs which will lead to the creation of a national aircargo fleet responsive to the present and future global requirements of commercial, postal, and military interests.

In our investigation we took a rather detailed look at our present airlift capability and have arrived at these conclusions: In the passenger business we find that the introduction of the jet aircraft, that the industry is both dynamic and expanding. We believe that the capability of the Nation to carry passengers is expanding quite rapidly and will continue to do so with the additional introduction of more jet aircraft. As an example, one 707 has almost the same passenger-miles capability in a year's time as the *Queen Mary*, or the *United States*. It compares on a ratio of 34,000 per year passengers to Europe by the *United States* compared to 30,000 by one jet 707.

Mr. VAN ZANDT. How many trips would a 707 make a month from Idlewild to London?

General COOPER. Between 20 and 25, round trips.

Mr. VAN ZANDT. Does that mean now that they return in the morning or take off that evening?

General COOPER. They make a round trip every day. Go one night and come back the next day is the way we understood it.

Mr. VAN ZANDT. These figures that you give there on equaling the passenger capacity of the *United States* or *Queen Mary*, that is including normal shutdown time for repairs?

General COOPER. Yes. They are averaging about 12 hours a day of utilization. It takes about 6 hours to get to Europe and return. They carry 110 passengers. Most of the airlines will have been equipped, that is, the major trunklines, with jet aircraft by 1963. The cargo field, however, is not quite as promising. We looked at it both from a commercial and military standpoint. We find that in the commercial area the industry is small. It is operating obsolete equipment. The result of this obsolete equipment is to generate high operating cost and high cost to the user of aircargo.

Because of these factors we have a limited capability in our air-cargo industry to expand and also to take a significant payload and a total cargo airlift in a year's time.

Mr. VAN ZANDT. Would you tell us what happens to all these four-engine jobs that are being retired by the commercial airliners? Do they eventually go into the cargo business? What happens to them?

General COOPER. Many things happen to them. There is a retrogression downward to smaller airlines in most cases. There have been some foreign sales. Today American is converting 10 DC–7's to air cargo. United is converting six to this business. Flying Tigers is operating today a Lockheed 1049–H which essentially was a passenger aircraft initially. It has been converted for cargo use. This method of converting airplanes designed for passenger use to cargo use does not produce a very efficient cargo aircraft. The passenger revenue is about 55 to 70 cents a ton-mile. This same aircraft, if you remove the windows, the seats, the non-payload items from the aircraft, you can then substitute and carry more payload for these items which are deadweight for carrying passengers. You therefore can get the operating cost downward but not downward anywhere near compared to what is possible with a new technologically capable aircraft; in other words, our present technology allows us to produce a much more efficient cargo aircraft if we approach it on designing a cargo aircraft initially. The primary thing that has developed recently is more efficient engines, which allows you to get the direct operating costs down to between 3½ to 4 cents a ton-mile. This will produce aircraft to the consumer at around 10 to 12 cents a ton-mile.

Shall I go on?

Mr. VAN ZANDT. Yes.

General COOPER. In the military field we find the military has a substantial number of essentially obsolete aircraft. The majority of these, except for the C–124 and the C–123's were aircraft that were initially passenger aircraft like the DC–4 and DC–6. Some have a combined passenger-cargo capability. None of the aircraft produced and used by the military is very economical aircraft. The big hop was when they started building the C–133. It is designed to take care of the outsized military cargo. It is not as efficient an airplane as it could have been because of the inefficiency of the engines plus the aerodynamic design of the aircraft. They missed the drag. It has a higher drag than initially contemplated. Therefore the aircraft is much slower. This combined with inefficient engines produces airlift at a high operating cost.

The Military Air Force is buying a total of 50 of these. They have 26 in the inventory.

The reasons for these deficiencies are, first, low priority; next, high operating cost; and third, no aggressive development program. In the low priority we have looked at it from the commercial and military

standpoint. On the commercial side we find the premium passenger tariffs that they can get today, the airliners, rightly so, have become obsessed with the glamour passenger hauling, because, first, it is the thing that is expanding rapidly. They are very highly competitive with other modes of transportation and they earn a good return from it.

Mr. VAN ZANDT. Do you mean the glamour passenger hauling? You mean the fringe benefits that are applied, such as champagne and cigars?

General COOPER. The glamour of air travel for passengers has attracted a large number of passengers from other modes of transportation. This combined with the speed and convenience. Therefore the trend is to have more and more air travel of passengers who pay a pretty high premium on a ton-mile basis. It is a very lucrative business to be in, particularly with jet aircraft.

Mr. VAN ZANDT. That word "glamour" misled me. Just—off the record.

(Further statement off the record.)

General COOPER. In the cargo field the price to the consumer is really not competitive as far as the ability to carry things that are now being carried by other means. There are exceptions to this. The high-priced, high-value items that are needed quickly do travel by air cargo today. In the military we have two reasons for the low priority: First, the support items in the military become secondary to the weapon systems. Any time you need money to buy additional weapon systems, aircraft, or missiles, if the services do not have the money on hand, it is awfully easy to use the money if it has already been appropriated for cargo or support items.

If you want a weapons system and the total budget is not enough, then you do not program for cargo airlift.

There are external influences which have been holding down the development of a military cargo system. MATS has for years been operating the largest airline in the world. The commercial operators view this with a great deal of alarm and any time that the military comes in and tries to program money to buy more modern aircraft, there is always an external fight against the military doing this.

Next is high operating cost. The reason for the high operating cost is the fact that we have converted aircraft not designed primarily for the carrying of cargo, plus the inefficient engines which heretofore have been the case. We do have one engine under development today, and the British have several engines which are very efficient engines. The aircraft that are being used in cargo today have a limited range in payload capability. This results in high rates to the consumer and therefore a limited demand which does not cause the cargo industry to expand as rapidly as has the passenger industry.

Next is no aggressive development program. Commercially operators are reluctant to invest too much of their own capital because, first, they have no real assurance of military business or the degree of military business they will have in years to come. The high price with today's aircraft tends to not build up a cargo industry, therefore the prediction of expansion of cargo total capacity, total demand in the future is uncertain. As you lower the price with more efficient aircraft—there have been several predictions that this expansion will take place, which is rather rapid, and I will show you a chart later regarding this.

On the military, there is no aggressive development program for cargo aircraft for the same reason I mentioned regarding the aircraft itself. The military just does not have the priority, because the priority is for weapon systems rather than cargo.

Mr. COHELAN. Would you elaborate on the business about the engines? You say the engines are not efficient, but there are some in a developmental stage. What type are you referring to?

General COOPER. We have under development today the 61 turboprop engine. Pratt & Whitney has a turbofan engine and also GE.

Mr. COHELAN. What are their special properties that make them more efficient?

General COOPER. The turboprop for a given weight, given engine weight produces a tremendous horsepower compared to reciprocating engines. Its operating fuel requirements per horsepower are comparable to the piston engine aircraft. Therefore you can end up with a total aircraft with less total weight in the engine and more room for cargo, plus you have a tremendous horsepower to take off tremendous loads. Any time you can add more load to an airplane the return per mile is greater.

Mr. COHELAN. What about fuel consumption?

General COOPER. The fuel consumption of a turbofan is comparable to the piston engine per horsepower. It allows the aircraft to go faster and can generate more passenger-miles or ton-miles in a given length of time. Therefore efficiencywise it is awfully close to the efficiency obtainable with a turboprop. The least efficient is the piston engine aircraft because it does not generate the same ton-miles per hour of flying time as the other for a given amount of fuel.

Mr. COHELAN. Thank you.

General COOPER. In looking at our national air cargo needs we consider the defense, postal service, and commercial. On defense we looked at wartime and peacetime. I will discuss the peacetime first.

During peacetime the military has two needs: One, to have a capability in being able to supply aircraft in case of emergency. The other is to provide routine supply and resupply to oversea troops, also, for training for the wartime mission.

During wartime the pipeline that has been built up during peacetime by and large continues. Furthermore, there will be situations where you may have to evacuate dependents. In addition to that they need to take care of the initial movement, troops and materiel to oversea locations. I am speaking of a limited war. In addition they need the resupply pipeline after the action gets started; for instance, an action like Lebanon or Korean action or Formosa.

The postal service, we looked at domestic as well as international. Domestically the postal service—and they have a bill up now for consideration which I am sure you are aware of, which is asking that all categories of mail be allowed to be flown by air. They are continually being faced with the program of reduction in the total number of passenger trains in the United States. This has caused them to look elsewhere for means of transporting mail.

They have found that the transportation of mail for any great distance at all is much more efficient by air. It corresponds with the fast pace of the rest of the industry. This is a mode of travel that the average letter sender would prefer. Internationally there is con-

siderable mail but not as great as domestically. They forecast that in the future there may be some decline in this because of possible cutbacks of oversea commitments.

The aircraft industry—and I will show you a chart on that—I am sorry that chart is not here, but we believe that the aircraft industry, as we move into jet aircraft there will be a less total number of aircraft required to do a given job. Therefore once the airlines have been equipped there will be a decline in the total productive capacity required of the aircraft manufacturers.

We look upon this not as a real problem to be concerned about but that this capacity does exist in case we come up with a suitable cargo aircraft that should be built. We have the productive capacity available in which an aircraft program can be introduced for production.

The market expansion—I have a chart on that. We predict a rapid expansion if we can get the total cost to the consumer down.

This is a pie chart on the distribution of total intercity ton-miles in 1958. Percentagewise rail carried 40 percent. Motor, 20 percent. Pipeline, 17 percent. Inland waterway, 17 percent; and only four-one-hundredths of 1 percent was carried by air.

This line here would not even be visible. It would be so small if the magnifying glass did not magnify it as shown here.

This is a really insignificant total being carried today.

We have had several studies, not conducted for us, however for various people we have reviewed these studies. We have contacted all major aircraft industry and airlines and have come up with a condensed view as to what the cargo potential will be in the future. This is based at 12½ cents per ton-mile. At the present the total air cargo is 1.8 billion ton-miles. This is eight-tenths billion military, two-tenths billion postal service, and eight-tenths billion commercial. The future forecast is 10.8 in 1965 at 12½ cents per ton-mile. This breaks down eight-tenths military, three-tenths postal—I am sorry—eight-tenths military, 3 billion ton-miles postal, and 7 billion ton-miles commercial. We made a prediction as to the total number of aircraft that might be required in this time period to take care of this total aircraft. We approached it on the basis of an aircraft with 70,000 pounds payload, 10 hours a day utilization, 50 percent load factor, and 400 miles an hour. This area of about one-third from the bottom represents the capability of 100 aircraft of that type.

We believe that there will be a requirement for over 300 aircraft to take care of this total load as predicted. In this, we have our own predictions combined with the predictions of others. We think it is if anything a conservative view at this price.

The conclusions are as follows: That the national interest requires a modern air cargo capability. Two, that the present state of the art can support the development of an economical cargo aircraft. Three, that the Government through its policies and programs assist the air cargo industry to achieve its optimum economic role at the earliest possible date.

In summarizing: We believe we do not have an aircargo capability sufficient to meet our national needs. Two: Important needs exist in the defense, postal and commercial areas. Three: Technical development, production capacity and operational ability are now capable of supporting a national aircargo industry. Four: Commercial pro-

curement and operation of a national cargo fleet can meet military, postal and commercial needs, and at less cost to the taxpayer.

Are there any further questions?

Mr. KILDAY. Thank you, General Cooper. That has been a most interesting and enlightening statement.

A chart or two back you said the Government should assist aircargo. In what specific manner, General?

General COOPER. We have made presentations of this to Postal, CAB, Bureau of the Budget, Treasury, DOD and we have concluded from our discussions with these people, plus our own inspection of the problem, that the best way to approach this would be to do so by means of a guaranteed loan to the operators which would allow them to go out and buy aircraft, cargo aircraft which might be put in the service under the use of the commercial operators and also be available during wartime to assist the military in their requirements.

Mr. KILDAY. That would be a guaranteed equipment loan?

General COOPER. Yes, sir.

Mr. KILDAY. They would not need any more than that?

General COOPER. No, sir.

Mr. KILDAY. Not even for development?

General COOPER. No, sir. We believe this is all that is required. We have seen evidence of what could happen if this kind of situation were in existence.

Seaboard and Western, Flying Tigers and Riddle have gone abroad to purchase aircraft to put in service in the United States, and the principal reason they have chosen this route is because of the guaranteed loan provided by the Canadian Government and also the British.

Mr. KILDAY. You would not have to have an operating subsidy? The industry has acquired enough experience and efficiency that you would not have anything comparable to the airmail subsidy in order to get into the cargo?

General COOPER. We believe if this is approached on a proper time-phasing basis that subsidy will not be required.

Mr. KILDAY. Are there questions from the other members of the committee?

Mr. VAN ZANDT. Looking to 1965 and the need for 300 aircraft at 400 miles an hour, would that be a turboprop job?

General COOPER. It could be a turboprop or turbofan.

We have not and have purposely stayed out of trying to dictate terms of what kind of an airplane should be developed. We think that the arm's-length transaction between the operator and the aircraft manufacturer is the best way to get a good vehicle.

Mr. VAN ZANDT. Since we are looking at 1965 and you have answered my question by saying it could be either turbojet or turbofan, does that mean an all-jet engine would be too expensive for a cargo job?

General COOPER. A turbojet could be used if you compare the turboprop, the turbofan, the turbojet and the present reciprocating aircraft. I would place them in this order of first, the turboprop. A very close second, the turbofan. A third, the turbojet; and fourth, the piston engine aircraft.

Mr. VAN ZANDT. What does this line of thinking mean from an airport standpoint?

General COOPER. The requirement for takeoff generally is less for a turboprop than actually for a piston-engine aircraft because the powerplant—let me start off again—a piston-engine aircraft, the present family cannot carry the payload that can be carried by future engines now under development and now in service.

The turboprop will give you the best takeoff generally speaking, although you could say a piston-engine aircraft would be comparable

But, if you start out with a heavy payload, heavier than today's airplane, the piston-engine aircraft, the turboprop can get a greater load off in about the same length of time as now required by piston-engine aircraft.

Mr. VAN ZANDT. This deficiency that you mention in cargo capabilities, does it mean also that there can be a deficiency in airports to handle it?

General COOPER. An airplane can be designed to operate from existing airports if they will compromise.

Every airplane that you design has certain compromises built into it.

Compromise the speed to get lower stalling speed, which gives you less ground requirement, or if your compromise the takeoff and landing requirement, you can again gain greater speed and also you can put more weight on——

Mr. VAN ZANDT. Are the airports of the country being improved as the years go by to the extent that we will have adequate airport facilities in the future to meet the air cargo needs of the country, militarywise, postalwise and domesticwise?

General COOPER. We, in FAA would like to see the trend for long runways reduced. We believe that from a technological standpoint, aircraft can be built that requires less takeoff and landing. We think they should be built in that direction.

Mr. KILDAY. A moment ago you referred to the reduced number of aircraft required with passengers moving to jets. Would that relieve any of the pressure on the airports or would they have to make enough more landings and takeoffs to compensate for it or would that relieve the pressure?

General COOPER. One jet can just about replace three piston-engine aircraft.

The reason it can replace it is because it makes more trips.

I anticipate there will be not any less requirement——

Mr. KILDAY. They will carry more but will take off more frequently?

General COOPER. You will gain some—the 707 takes 110 people.

This is a greater payload than the existing piston engine aircraft.

Mr. COHELAN. General, it was called to my attention that the FAA is experimenting with an arresting gear on land-based operation.

Could you comment on that? What state of development is it in and what prospects there are for commercial use?

General COOPER. There are several barriers under development both within the Air Force and also within the Navy. FAA is looking at these quite closely. There have been several additional proposals. Some look very good. This will allow you to go either one or two ways. You can build a long runway and use this as an emergency device, or you can shorten the runway and use it as a standard operational procedure.

We prefer that now, with the present state of the art, that they do not be considered as a standard use but only as an emergency use.

The probability of catching with today's barrier is not as high as it should be.

Mr. COHELAN. I do not understand this. The technique has been mastered by the Navy flyers, as I say, I yield to you and to your professional outlook on the matter, but just as a layman standing on the Admiral's deck there of the battleship, they go off and they come in and they bring in those sky warriors on a carrier. Why can't they land them on a land-based operation? It is a big airplane and it is a jet.

General COOPER. They do not catch all of them. They catch most of them in the Navy.

Mr. COHELAN. I agree they have to make another run once in a while, to be sure.

General COOPER. The barriers we have today operate on the principle of a cable popping up and catching part of the landing gear.

If you design a barrier to operate most efficiently against a 104, for instance, at 50 knots, then as you slow down or speed up at the time you hit the barrier, you reduce the probability of being caught. In fact, the probability versus speed is a bell-shaped probability curve.

As you go down, or above the optimum speed, the chance of getting caught is reduced.

The Air Force experience has been that about 50 percent of the aircraft that go to the barrier become engaged with the barrier.

The other 50 percent do not.

Mr. COHELAN. Eventually the—what do they call that—in the recovery operation they finally get everybody home but it may be 50 percent of the time they do not come in——

General COOPER. No, sir. I am saying the Air Force, not the Navy now.

Mr. COHELAN. How about the Navy.

General COOPER. I do not know what the percentage is on the Navy.

Mr. COHELAN. They seem to get them down.

General COOPER. They operate on a different principle than the present airplanes. They have a hook which actually engages one of many cables on the deck. The present runway barriers operate on the principle of catching the landing gear itself.

They do not have a hook on the present Air Force fighters or the commercial operator's aircraft.

Mr. COHELAN. The instance that was called to my attention, General, was the use of the hook. It stated that your Agency is conducting these experiments, why not use a hook?

General COOPER. I think that is a good question. I am not sure that I can answer it.

Mr. COHELAN. I would be interested if sometime later on you could develop it. I am fascinated with the idea. It seems to me to be quite practical if for no other reason than as a safety device in the landing of jets. There is some relationship in my mind to the length of runways, and it seems to me it would be consistent with our own testimony here this morning that FAA sees the future of this thing in terms of shorter runways.

General COOPER. We are looking at all, including the Navy method. The Air Force has also looked at the Navy method. I am not really

certain why they rejected the Navy method compared to the present method used on Air Force runways.

When you put a hook on an airplane, you also reduce its performance somewhat. They may have considered this something undesirable.

Mr. COHELAN. I think the reason for the Air Force rejection may have something to do with takeoff.

Mr. VAN ZANDT. It costs more to build an airplane to land and take off a carrier than it does just to take off from a strip.

General COOPER. Yes, sir.

Mr. VAN ZANDT. You would have to build this additional strength into a commercial aircraft?

General COOPER. Right.

Mr. VAN ZANDT. Getting again to the length of strips and the policy that you are giving consideration to now of shortening of the strips, does that mean a plane like the 707 will have to be redesigned?

General COOPER. No, sir. I would like to clarify one thing. We believe we should hold the line on the length of runways with the maximum length that we will participate in there at 10,500 feet of runway. We do not believe that we should allow this to go beyond that point for economic reasons. If you build an airplane that required too long a runway, you automatically eliminate many that cannot afford that kind of airport.

It must be a compromise so you can provide jet service to more than just the major terminals in the United States.

There is a difficulty when you design an airplane that requires too long a runway. You require new runways, new airfields be built, and they must be put farther and farther away from communities.

Today you have a situation where you can go from downtown New York to downtown Chicago faster than by not going by jet because you use two separate airports.

Mr. VAN ZANDT. Is there any deficit or will there be any deficit in the event of an overnight expansion of aircargo needs from the standpoint of personnel, trained personnel?

General COOPER. No, sir. Pan American is quite concerned as well as the other airlines today by the fact that since one jet can replace three piston-engine aircraft it means that you will have a requirement for fewer total crews.

Therefore, the availability of crews to fly the cargo aircraft we think exists.

Mr. BECKER. General, I read an article in the Herald Tribune on Monday morning July 27 of this week. That disturbed me quite considerably because I was under the impression, having sat through our hearings on the MATS program and knowing somewhat of the intention of the development of a national aircargo fleet. According to this article, and I would like to read it if you do not mind, for those who have not read it—I will give it to the reporter to insert in the record—this is dated Washington, July 26.

A widely supported program for the development of a national aircargo fleet came to a sudden and mysterious halt in the Pentagon last week it was learned today.

Informed sources said Secretary of the Air Force James H. Douglas and some of his aides apparently no longer accept the proposed new concepts for the Military Air Transport Service which they previously had endorsed.

Reportedly Mr. Douglas has decided to delay indefinitely the MATS reorientation plan formally approved by him last spring. He also is said to be holding up a report to President Eisenhower on MATS.

And the last paragraph:

In transmitting the Air Force position to Mr. McElroy, Mr. Douglas said in a memorandum last April that as a long-range objective, subject to the availability of modern and economical long-range commercial cargo aircraft—civil cargo airlifts "will be contracted for in peacetime to support a substantial degree overseas logistic supply."

I am going to insert the whole article in the record.

Mr. KILDAY. That will be done.

(The article referred to follows:)

A widely supported program for the development of a national aircargo fleet came to a sudden and mysterious halt in the Pentagon last week, it was learned today.

Informed sources said Secretary of the Air Force James H. Douglas and some of his aides apparently no longer accept the proposed new concepts for the Military Air Transport Service which they previously had endorsed.

Reportedly Mr. Douglas has decided to delay indefinitely the MATS reorientation plan formally approved by him last spring. He also is said to be holding up a report to President Eisenhower on MATS.

Indications are that the action is stirring up a new and bitter behind-the-scenes battle over the role of MATS with regard to the scheduled airlines and particularly the all-cargo airlines.

The Secretary's apparent about-face on MATS is known to have shocked lower elements of the Air Force Staff, and to have raised doubts as to whether senior persons in the Air Force, including Gen. Curtis LeMay, Vice Chief of Staff, fully realized what was happening.

There was no comment immediately from Mr. Douglas, General LeMay, or other officials.

The airlines long have protested that much of the transportation provided by MATS should be handled by commercial operators.

Last summer President Eisenhower asked Secretary of Defense Neil H. McElroy for a MATS study. The request was passed to Mr. Douglas and the Air Staff completed a survey last fall. General LeMay submitted a recommendation to Mr. Douglas in April.

In general the proposal was that MATS be "reoriented" increasingly toward purely military activity and that there be greater reliance on commercial services for general Defense Department air transport.

In transmitting the Air Force position to Mr. McElroy, Mr. Douglas said in a memorandum last April that as a long-range objective—subject to the availability of modern and economical long-range commercial cargo aircraft—civil cargo airlifts "will be contracted for in peacetime to support a substantial degree oversea logistic supply."

Mr. BECKER. The reason for this is what? Because we thought, and I thought this program they were going to institute, this development, was going to be of great benefit to us in the event of emergency, and it must be promoted during peacetime, if it is to be of any use at all in the event of emergency?

What is the reason or do you know, sir?

General COOPER. We believe our program will span the total national capability. We do not know for sure what is the reason why the Air Force is resisting this. This must be determined from the Air Force.

We do know there is resistance.

Mr. BECKER. Well, now, you have a conflict. You say you want to develop this. I take that from what you say. The Air Force now is resisting it.

General COOPER. Yes.

Mr. BECKER. It seems to me rather peculiar. This hits the newspapers and we are not aware that such a conflict is going on. I thought all the time this study and development was in progress since the early part of last year. Now, apparently, it is at a standstill again. When are we going to have something? I said this earlier: Are we going to have a plan sometime or is it always going to be a study that is going on and we do not have a plan? Well, when are we going to be ready?

General COOPER. We are trying to take this story to Congress this session.

Mr. BECKER. It is very short.

General COOPER. We realize this. We have gotten resistance from the Air Force.

However, the DOD is still retaining their position of coordination.

Mr. BECKER. I intend to direct a letter to the Secretary, asking what is the basis for this, why has this change suddenly come about, because certainly we need the use—if we are going to have an M-day preparedness, we have to have the full utilization of the air cargo fleet together with MATS.

That has been conceded a long time ago. MATS cannot do the job alone. If we are not going to have development of this program, if it is stopped now and—and his statement was April 1958, and this is almost August 1959, a year and 4 months, and now this development is stopped—where are we going?

Do you have any authority in this field, your Department?

General COOPER. I wish I could answer your question, sir. You came in late——

Mr. BECKER. I had another subcommittee meeting.

I apologized to the chairman before I came.

General COOPER. I think I should clarify my position.

I am on loan from the Air Force to the Federal Aviation Agency. I do not work for the Air Force. The story I have presented this morning is an FAA concept of what we should do. We hope to get this to the Congress and get approval this year. We still have the coordination, verbal coordination of the DOD.

We hope that this position will be maintained, and we hope we can go forward with it. I cannot answer the question as to why the Air Force is now withdrawing their support, as suggested in this article.

Mr. BECKER. I did not assume that you could, General. But I still want to get the question in the record so that I can now direct a letter to the Secretary, Secretary McElroy, as well as to the Secretary of the Air Force to find out why, after some 16 months, this thing is being dropped.

Mr. KILDAY. Maybe this hearing will help in connection with that.

Mr. BECKER. I hope so.

What I am anxious about, as were you, I get so fed up with the fact that all the time we have studies going on. What I would like to know, and I am sure the committee would, is when are we going to have a plan that is ready?

When are we going to have something ready that can be utilized at a given time?

Mr. COHELAN. I have no further questions.

Mr. KILDAY. Mr. Sandweg?

Mr. SANDWEG. No questions.

Mr. KILDAY. You have been very helpful, and we appreciate your coming.

The next witness is Mr. S. G. Tipton, president of the Air Transport Association of America.

STATEMENT OF STUART G. TIPTON, PRESIDENT, AIR TRANSPORT ASSOCIATION

Do you have others that you would like to have with you?

Mr. TIPTON. They will sit back, and I may want to call upon them.

My name is Stuart G. Tipton. I represent the Air Transport Association of America which has as its members virtually all the scheduled certificated airlines of the United States.

We are pleased to come before the committee to report as to the status of the air transport industry. By the very nature of modern war, a nation fights with its entire industrial capacity. As far as transportation is concerned, the airline system, the railroad system, and other transportation media are weapons to be used on behalf of our national security.

This committee is to be congratulated for taking the time to inquire as to the state of effectiveness and readiness of these weapons. Technological progress has necessarily complicated your inquiry, and set different standards against which to measure its results.

No longer can "mobilization" carry with it the notion that time can be taken to do things differently than they are being done. To be effective, the transportation system must be so powerful and so flexible that it can react immediately to carry out whatever its wartime assignment may be.

Thus, the effectiveness of the air transport system for national security must be judged as it is and not as it could be, given time to mobilize.

Viewed in this light, the first thing we should do is report to the committee on the present status of the air transport industry—its capacity, its technological development, its economic status.

As of January 1959, the scheduled airlines operated 1,924 aircraft. Included in this fleet, in constantly increasing numbers, are 600-mile-per-hour jets which span the continent about in 5 hours.

The industry will put additional jets in service at an average rate of 16 per month for the remainder of this year and all of next year. By the end of this year our airlines will be operating about 300 turbine aircraft, and we will take delivery of another 190 next year. The total number of such aircraft ordered by the U.S. scheduled airlines amounts to 560. During the year 1958 the system produced 7¼ billion available ton-miles of transportation, about 20 million per day. Thus, every day sufficient capacity is created to meet the annual airlift requirements of the Korean war.

I can use another method of illustrating the capacity of the industry by pointing out that the international and oversea airlines can handle effective June 1, 1960, 86 percent of all the passengers moving in the MATS service and 73 percent of all the cargo moving otherwise.

The air transport system blankets the country, serving very nearly 1,000 cities and towns. It provides connections between the continental United States and its outlying States, Territories, and possessions. It provides a network of air routes abroad, including two round-the-world systems.

Today the airlines account for over 45 percent of the total domestic intercity common carriage passenger movements. In international travel, the percentage is even higher over the major trade routes of the world. Last year, for example, airlines carried more people across the Atlantic than were carried by surface transportation.

As far as cargo transportation is concerned, the industry moves about 500 million ton-miles of cargo annually. While this class of traffic is not large at the present time, it is increasing. However, we have been informed repeatedly by the Government that while there is every reason to be satisfied with our preparations to move passenger traffic, a substantial deficit exists with respect to the movement of cargo. Steps are now being taken by the airlines to improve their status in this respect. We expect to bring into the fleet during the next 18 months 16 DC–7 airfreighters and 15 CL–44's, a Canadian-built freight airplane. Based upon past experience in the development of freight traffic, however, rapid improvement in this area comes hard.

We will discuss this problem at length in a moment.

I should refer the committee also to an excellent discussion of air freight progress and the status of air freight development which appears in this morning's Wall Street Journal. It is on the first page and gives a good review of our present situation.

It is a very timely article, Mr. Chairman.

A factor of major importance in the effectiveness of the air transport system for national security is the airways and air traffic control system installed and operated by the Federal Government for use by civil and military aviation.

Not long ago its development was faltering badly, and the ability of both civil and military operators to move through the Nation's airspace with speed and efficiency was threatened. The Congress tackled this problem very effectively during the last session of Congress, reviewed the state of our airways and air traffic control system and the Government organization which had charge of it, and enacted revolutionary new legislation to deal with the problem.

We have every reason to believe that this legislation creating the new Federal Aviation Agency will be effective. It provides for a dynamic program of development in this field and for close military-civil coordination to this end. We have been somewhat concerned in recent weeks by reason of substantial cuts in requested appropriations which may well hamper the efforts of the FAA to carry their program into effect with maximum speed. This decision should be reviewed. It seems likely that the cuts will result in new facilities standing idle for lack of personnel.

Another major element to be considered is the airport network, an integral part of an operating air transport system. In view of the dramatic developments in aircraft and other equipment, strenuous efforts are being required to bring our airport system up to date. The Congress has recently acted upon legislation to provide for an extension of Federal aid in this field, and municipalities all over the country are concentrating on improvement of their airports.

The economic strength and stability of the industry has in recent years left much to be desired. A CAB examiner has concluded:

> In 1957 and 1958, both yearly and 5-year averages of profits are well below a reasonable level.

At the moment the industry's financial situation seems to be improving. The general improvement in economic activity in the country has resulted in a substantial increase in business, and the CAB has permitted during the past 2 years modest rate increases which aggregated about 10 percent.

As a part of a general investigation of airline fares, an examiner of the Board has recommended that these increases be continued, and that a further modest increase be permitted. Assuming that this recommendation is agreed to, we would be less than frank if we did not recognize and report the very considerable financial strain to which the industry will continue to be subjected as a result of the revolution in airline fleets and the increase in airline debt. I should point out that the 4-year jet investment program of over $2 billion was three times the industry's net worth when the program was started.

There you have in barest outline a report on the air transport system as it forms a part of the Nation's ability to defend itself. In terms of overall capacity we are well off, but struggling with a deficit in cargo lift. The efficiency of the system is high. In technological development the United States is unsurpassed.

As far as airways, air traffic control, and airports are concerned, difficult problems present themselves, but the problems are recognized and effective work is underway to meet them.

The air transport industry's relationship to national security is twofold; it must be prepared to provide at all times, and without fail, the necessary support for the Nation's economy during times of emergency. In other words, it must do its peacetime job during wartime—only better.

In addition, on the basis of present planning, the industry must be prepared to contribute directly to the Military Establishment men and equipment for military air transportation.

It is not necessary for us to dwell upon the CRAF program, since General Tunner has described the essence of the program to the committee already.

Here we have a particularly difficult planning problem. At the beginning of World War II it was possible for the industry to contribute half of its men and equipment for direct military use, without doing substantial damage to the Nation's economy. Since that time, however, air transport has become such an important element of the Nation's total transportation system that great care must be taken in working out the portion of the fleet which may be withdrawn for direct military use. As General Tunner has said, these plans are under constant study and revision and this will continue to be the case. The airlines recognize their obligation here and will continue to work closely and cooperatively with the Government.

Since the airlines are one of the Nation's major weapons, they have a substantial obligation to make sure that the weapon is as good as it can be made. Considering capacity, efficiency, and technological development, they have done a good job. They will continue to do a good job by taking advantage of every available opportunity to improve the system. But they are not completely masters of their own progress. The airlines are a regulated industry, and consequently their progress can be favorably or unfavorably affected by governmental action at many different points. This being the case, the Government has an obligation to so conduct itself that airline development is not impaired.

In fact, among Government administrators, whether military or civil, the role of the air transport system as a national security asset should constantly be recognized. This is not always done.

Some examples are in order.

The CAB which is responsible for the economic regulation of the airline industry and required—

> to foster sound economic conditions: in the industry, has not always seemed to appreciate the full significance of its obligations. The State Department in negotiating with respect to the operations of foreign airlines to the United States has often seemed to ignore the economic impact of such operations on our airlines. Probably the best illustration of our point is found in the activities of the Department of Defense, because that Department has seemed, on the one hand, to recognize fully the national security significance of the air transport system, and, on the other, to ignore its value. In an unusual move, the Department of Defense wrote the Civil Aeronautics Board about a year ago, saying it "recognizes as a matter of the greatest urgency the necessity for maintaining a strong, modern and economically sound air carrier industry to meet the requirements of national defense during peacetime and national emergencies * * *. Modern, vigorous, and responsive transportation systems are a vital part of this Nation's defense capability * * * the Department of Defense is much concerned with the continued development of the air carrier industry and its financial ability to acquire and operate modern equipment on a continuing basis.

The Air Force also manifested the same attitude by providing positive support of the current jet reequipment program. It allowed our people to gain operational and maintenance experience by actually taking key airline personnel into Air Force schools and bases. In short, the Air Force helped the Nation's civil jet age get underway.

However, the Defense Establishment has not been entirely consistent in its policy. It could well have employed the large pool of traffic at its disposal to encourage the development of a better civil air transport industry and an expanded national airlift capability. Instead of that it has operated the Military Air Transport Service in competition with the scheduled carriers for the movement of this traffic.

Assistant Secretary of Defense McGuire recently stated:

> * * * that continuity of the oversea logistic pipeline must be assured if we are to take recurring cold war crises in our stride.

Mr. McGuire further stated that disruption of the logistic pipeline—

> can certainly be minimized through the development of an appropriate U.S. civil air cargo lift capacity and its use by the military in peacetime for routine logistic support.

This is a sound policy, based on the national interest, and Mr. McGuire is to be congratulated. We anxiously await implementation of the new Defense Department policy. It will permit MATS to concentrate on being combat ready to meet the "hard core" emergency airlift requirements; that is, those requirements which by their nature can best be met by military operation.

By relieving MATS of the task of providing the Department of Defense with routine commercial-type air transportation, MATS could then have its transport forces properly poised, ready to strike when the whistle blows. The MATS fleet need not be flung to the far corners of the globe like a commercial international airline—instead it should be maintained in a high state of readiness.

At the present time MATS is not a military force designed to meet the "hard core" emergency airlift requirements. MATS is in the business of handling the routine air logistics traffic, the passengers

and cargo which the Defense Department has said should be handled by civil carriers.

With MATS being in the airline-type operation, MATS cannot assure the Defense Department of continuity of the oversea logistic pipeline when its efforts might be directed to emergency airlift. On the other hand, the airlines can assure this continuity if MATS permits the Department's traffic to be carried by the airlines at fair and reasonable rates in normal times as well as during periods of emergency.

We have noted with some concern the apparent gap between the Defense Department's new policies and MAT's practices.

MATS has contended it is not in the airline field, yet it has published schedules and timetables, operates between commercial-type terminal points, and in essence has all the characteristics of a commercial airline operation, including published tariffs and 480 stewardesses. Our hope is that in the future MATS will tend to operate more closely to the Department of Defense description. If that were done, the air transport industry can provide the Nation with a greater amount of cargo capability, capability which can be furnished at a minimum cost to the Nation.

Mr. Quesada, the Administrator of FAA, in testimony before the House Military Operations Subcommittee not long ago, stated:

> It is our conviction that an effective cargo fleet responsive also to pure military requirements can be generated outside the military budgets, thus avoiding the direct competition with weapons systems, which condition guarantees an inadequate cargo support fleet.

He further noted:

> It appears likely that given the development of suitable aircraft, minimum Government activity and maximum private enterprise could produce the required capability at the least cost to the taxpayer and greatest benefit to the Nation's economy and welfare.

To provide the climate necessary for equipment progress, the Department of Defense will need to alter the practice that it has been following in procuring commercial airlift. Up to now the Department of Defense has usually asked for competitive bids for commercial air transportation, even though the traffic was going to move directly over the routes of air carriers certificated to operate as public utilities by the CAB and approved by the President.

This competitive bidding has reached the point where MATS recently let $24 million worth of domestic military support transportation—mostly freight—by competitive bidding, which has resulted and will result in the traffic being awarded for movement in World War II vintage transport airfreighters. In fact, one of the contracts actually specified that post-World War II aircraft were not acceptable.

In almost all cases the rates that are arrived at as a result of competitive bidding are so marginal that they give the carrier receiving the contract no opportunity even to earn the depreciation on a modern airplane, let alone attain the financial strength necessary to finance a newer and improved aircraft.

In short, the Department of Defense is missing a great opportunity to improve the national defense capability of both MATS and the airlines. If the scheduled airlines were permitted to carry, at published rates and fares, the 1 billion ton-miles of cargo traffic and the 400 million ton-miles of passenger traffic handled by MATS over air-

line routes, they could accelerate and expand their reequipment programs. By this same action MATS would be permitted to assume its proper role as a combat transport organization and be instantly ready to meet emergency requirements. This is the largest single step that could be taken to improve the Nation's airlift capability.

In conclusion, I would like to recommend to this committee that it make certain that all elements within our Government be aware of the significant part the airlines play in national security. The Nation has the opportunity of providing a maximum amount of defense at minimum cost. Congress can guide and develop the necessary sense of responsibility of those in our Government who can allow the airlines to fulfill their role in national security, a requirement that has been recognized repeatedly by the Congress.

Mr. KILDAY. Thank you, Mr. Tipton.

Mr. BECKER. Mr. Chairman, again I go back to the study on the MATS program. You talk about MATS being permitted to assume its proper role as a combat transport organization. MATS contends that to keep it a combat-ready organization it must have its pilots and crews on active duty. It must have its planes flying. It must have them doing something. So therefore their argument is that to fly these MATS transports without carrying cargo would be a great waste of the taxpayers' money. So they are using them to keep their men in proper training condition and thereby flying cargo which is competing with your airlines.

How are we going to avoid that?

Mr. TIPTON. We have studied that contention very carefully. If it is right, we would not want to take a position in opposition to it. We do not think it is right. First, take pilot training. The MATS pilots operate on the average of 90 hours a month. Our pilots are forbidden to operate more than 85 hours a month because of possible fatigue. It is a paradox that the military would operate their pilots for training purposes more than we are permitted to operate our pilots for their day-in and day-out work. You do not need to conduct anywhere near that elaborate an operation in order to maintain pilots in a condition to fly their airplanes. For example, the troop carrier pilots have to be good, too. The troop carrier fleet operates at about an hour and a half a day on the average. MATS operates on the average of about five. To accomplish the purpose that they specify, they do not need near the extensive operation that they are conducting.

Secondly, the fact that they are conducting this extensive operation impairs their ability to do the job they are training for, because their airplanes, since they are running an airplane, running an airline, their airplanes are scattered all over the world. When they are needed, they have to be brought in from every place. So that the argument that you referred to, Mr. Becker, we regard as a completely unsound one, and we regard the practice of these extensive elaborate operations as unwise from the standpoint of maintaining a sound national defense posture.

Mr. BECKER. At the same time before the subcommittee, I say about a year ago, my memory may not serve me correctly, maybe a year and a half ago, MATS virtually proved that their type of program was necessary for the proper training of their crews and proper readiness of their crews and the planes at all times. They virtually proved that to the satisfaction of the committee, the Rivers subcommittee.

There you have a difference of opinion in this thing right now. You point out one thing here critically, of the fact that they are giving out contracts on a competitive bidding basis, which is not even allowing for the matter of depreciation. Well, is it your argument that these contracts should be given out without bidding and should be given out on the basis of figuring out the cost to the private carriers, cargo carriers, taking into consideration all their costs, and add on a minimum profit rather than by competitive bidding as is done in almost every type of contract work?

Mr. TIPTON. It is our argument that competitive bidding should not be used in this area because airlines are public utilities like electric light companies or railroads. Their rates are supervised by the Government already. They are supervised to make sure that they are, first, not too high, and second, that they are not so low that they impair the ability of the public utility to continue.

Since that regulation is already prescribed by Congress, there is no justification in this area for using competitive bidding any more than there would be justification for asking for competitive bidding for electric power.

Mr. BECKER. Mr. Tipton, then if the Defense Department were to give out contracts on the basis that you suggest, would they not be subject to the question of favoritism, if you are to use the established rates and there is no bidding? Would they not be subject to criticism just as we had in the Army recently in the movement of household goods of military and civilian personnel in the military? We had great criticism of that right here in Washington, favoritism to certain truck carriers. An investigation took place over that. Would you not find the same thing applying here?

Mr. TIPTON. I would think not. The policy of the Defense Department in the domestic operation, domestic field is just exactly the reverse of what it is in the international field. In the international field they have put all their traffic on MATS if they can. In the domestic field they put all their traffic on common carriers if they can. And they ship and transport passengers by the thousands over the airlines at published tariff rates without any charges of favoritism. They route the passengers or cargo to get the best transportation they can at published tariff rates. That can be done in the international field just as well. I would expect that the Defense Department having heavy loads of cargo would behave in the same way, for example, that Sears and Roebuck does. They send their goods on the basis of published rates and they try to find the best service they can get. They put it on that carrier. It seems to me that since it works with respect to all the commercial cargo we are carrying and commercial passengers we are carrying, it ought to work with the Government.

Mr. BECKER. On the top of page 9 you make a statement that I find not difficult to understand but very difficult to accept. You say "In fact, one of the contracts actually specified that post-World War II aircraft were not acceptable." How would such a specification be demanded?

Mr. TIPTON. The only explanation I can think of is what I regard as a thoroughly shortsighted objective of getting the prices way down. Those old airplanes—DC–4's are an old airplane. They are pretty much written off, their cost is pretty much written off; probably has been two or three times. By that reason, insisting on that

kind of aircraft, you can probably get a lesser price than you would if you set your sights on newer aircraft and would set a price that would let the carrier earn his depreciation on the newer one.

Mr. BECKER. It seems to me this is pointing up a part of the question that I brought up in the matter of competitive bidding. In this case they are restricting the competition. By this provision they are restricting the competition, that if you are permitted to use post-World War II planes you could probably get better prices. Would that be correct?

Mr. TIPTON. In all likelihood you could not because of the necessity of earning depreciation on a new airplane.

Mr. BECKER. How would this affect companies that have post-World War II planes?

Mr. TIPTON. Here is what happens, as a result of competitive bidding generally. Our industry is a violently competitive one. The result of competitive bidding is to bid the prices down and down and down to the point where the carrier can get his out-of-pocket costs, if he is lucky, and it gives him no support, no financial support on the basis of which he can acquire any new kind of aircraft, because, for example, a new jet costs $5 million. You have to have a very considerable financial strength to buy one. You cannot get it on a competitive bid basis because the prices that are finally agreed by the Defense Department are so low that you can never build up any financial strength. That is really the basic reason we argue so strongly for having this transportation performed under our regular tariffs, because those tariffs under the regulation by the CAB are regulated for the purpose that they are not too high, so as to oppress the shipper or traveler, and not too low as to impair the economic standing of the carrier. They are carefully worked out and supervised. In that way the Government is protected from being overcharged, and at the same time the carriers in the industry are given an adequate price so they can continue their development.

Mr. BECKER. Mr. Chairman, I have just one more question. I have a number of more places marked but I do not want to take up more time.

On page 7 you complement Mr. McGuire when he testified before the committee. In his statement he says "We anxiously await implementation of the new Defense Department policy." Was that policy the one that I referred to in respect to this operation or is this a different policy?

Mr. TIPTON. The situation is somewhat more complicated than even is reflected by the article in the Herald. A month or 6 weeks ago Mr. McGuire, who is Under Secretary of Transportation for Supply and Logistics, in a letter sent to Senator Mike Monroney, expressed the Defense Department's policy with respect to the utilization of commercial carriers to move the routine logistic traffic. In part of that he seemed to be saying that the Defense Department felt that the commercial carriers should be used to move that traffic in order that MATS would be available to deal with military emergencies.

At that time we were delighted because it seemed to be adopting a policy that made great good sense from the standpoint of the national defense. Since that time things have gone on just as before.

Mr. BECKER. Thank you.

Mr. KILDAY. Mr. Tipton, if MATS should be operated as you feel it should be, part of its lift potential would go unused, is that not true?

Mr. TIPTON. Yes, it would.

Mr. KILDAY. You feel that should be charged to the defense effort?

Mr. TIPTON. I think it should. Because the way it is being operated now we feel it is not producing maximum national defense.

Mr. KILDAY. Are there other questions?

Mr. COHELAN. Mr. Tipton, I was interested in your remark, I think it was on page 4, discussing your average profits, and you suggest that they were below a reasonable level, which incited the curiosity of my mind. As a public carrier, what do you regard as a reasonable level?

Mr. TIPTON. In a fare investigation being conducted by the Board the estimates of the individual carriers as to what they regarded as a reasonable level of profits varied between 12 and 15 percent on their investments, on invested capital. I should add, too, though, the examiner that I have referred to in passing upon those arguments has not agreed with them. He has said that he believes that a proper level of profits for the air transport industry is about 12 percent.

Mr. COHELAN. What you are saying about competitive bidding interests me. What you are suggesting is that you cannot bid competitively; is that the idea?

Mr. TIPTON. What I am suggesting here is that in the experience of the air transport industry, whenever competitive bidding is used the results have been bad, and this goes back all during the history of the air transport industry beginning with the rather unfortunate experience with airmail contracts in the very early days when violent competition and abuses resulted in the cancellation of the mail contracts and great trouble. That continued on several other occasions, and we are having the same experience with the Department of Defense in driving the prices down to the point where the traffic being provided by the Defense Department is not making its contribution to the development of new equipment and progress in the industry.

Mr. COHELAN. Am I correct in understanding that in the commercial area because—as you describe yourself, a kind of a quasi-public utility, would that be a fair representation or do you regard yourself as a public utility?

Mr. TIPTON. We are a public utility.

Mr. COHELAN. You are subject to rate regulation by the Federal Aviation Agency?

Mr. TIPTON. By the Civil Aeronautics Board.

Mr. COHELAN. The theory is that you have a certain monopoly on a certain type of operation, as an enterprise, and you have an important service to perform in our national life.

That suggests that there is no price competition in the commercial area. Is that correct?

Mr. TIPTON. That is not correct. Because while we are a regulated public utility, we are not a monopolistic public utility like a light company, which has an area all to itself. We are a public utility in the same sense that the railroads are a public utility, in which there is rate regulation but there is also substantial competition not only with respect to rates but service and a variety of other things.

For example, you can take any one of nine airlines to get between here and New York.

Mr. COHELAN. I can get off one airline and I can go over to the other airline counter and get another ticket and I do not lose anything unless there is some adjustment in destination.

Mr. TIPTON. The practice in this industry, either wisely or unwisely, has always been if one airline on a route comes forward with a price reduction everybody promptly meets him. The assumption has been that you cannot remain in the market if you have a price lower than your competitor. We are having a price competition from New York to Florida right at the moment.

Mr. COHELAN. Forgive my ignorance. I do not know a thing about this. How can you be regulated and then be involved in price cutting?

Mr. TIPTON. Here is the way: The statute provides that any air carrier can set his price by filing a tariff with the Civil Aeronautics Board in which he says "I am going to charge $45 to Miami from New York." The Civil Aeronautics Board has the power to look at that. If they think it is too high or too low they can suspend it so he cannot charge it. At that point he can withdraw it and go do something else. Or he can continue to contend for that particular price. The Civil Aeronautics Board then investigates and determines whether the rate is fair and reasonable. If they find it fair and reasonable, the rate goes into effect. If they find it not fair and reasonable, their original action is suspending the rate is sustained. The carrier is not permitted to charge it.

So that you have a considerable flexibility in advocating changes in rates, but you always have the Civil Aeronautics Board imposing a check on the rate to be sure that it is neither too high nor too low.

Mr. COHELAN. Is it not true, in effect, the rate that is set, established based upon application or otherwise, is in fact the rate, that is to say, once it has been approved by the Civil Aeronautics Board or whoever the authority is, but that is a publicly approved rate?

Mr. TIPTON. Exactly.

Mr. COHELAN. It becomes the going rate and there is no more competition as far as the rate is concerned because it is the published rate?

Mr. TIPTON. As soon as that rate is approved the carrier can very promptly cut the rate $5, file a new tariff and go through this process again.

Mr. COHELAN. I do not follow you. As a public agency here looking into this, and you have described it as a fair and reasonable finding, that is to say, this is at least the procedural side of it, I am trying to find out what the procedures are that permit you to make certain adjustments. Let us go on from that. You have answered my question quite adequately. I wanted to go on with this last page, page 9, in your conclusion. I am very interested in what you are saying, and I have a lot to learn about what these relationships are, but I am quite startled. I want to know, for example, could you tell me what the percentage of this 1 billion ton-miles of cargo traffic represents of the total traffic?

Mr. TIPTON. We carry commercially 500 million ton-miles annually. That is the entire industry overseas and——

Mr. COHELAN. How many?

Mr. TIPTON. 500 million ton-miles. The MATS traffic is double the cargo traffic carried by the entire industry. That comparison is not quite right here. This traffic, the billion miles carried by MATS moves overseas and on international routes of MATS. Consequently you must compare it with our traffic moving on international and oversea routes. That traffic amounts to 128 million ton-miles a year. Consequently, the 1 billion ton-miles is six times more than our services carry.

Mr. COHELAN. It is also true, even allowing for this bill, the total volume, as the general pointed out to us, is a very small portion of all traffic.

No. 2, what about the passenger-miles? What percent does this represent of total passenger-miles? Four hundred million you cite here. If you cannot give that to me, will you supply it for the record?

Mr. TIPTON. May I put it in at this point in the record?

Mr. KILDAY. Yes, you can supply it. There will be a role call soon.

Mr. TIPTON. It is about two-thirds of our total passenger traffic in the oversea and international operation.

Mr. COHELAN. Four hundred million ton-miles represents two-thirds of the total passenger-miles, passenger traffic as far as our domestic airlines?

Mr. TIPTON. International and overseas.

Mr. COHELAN. To invert that, the one-third of the total volume of all traffic is commercial then?

Mr. TIPTON. Sixty percent of the combined total of passenger traffic is commercial. Forty percent is MATS.

Mr. COHELAN. What about this business of competitive bidding as far as defense is concerned? We talked about the public sector, the commercial sector. Let us talk about the Government sector. You are suggesting to us that the Defense Department is driving a hard bargain and wants something less than published rates, is that what you are saying?

Mr. TIPTON. Exactly that and very substantially that.

Mr. COHELAN. What is the justification if you know? What is the argument or theory of the Government?

Mr. TIPTON. I think the Government's theory is one which says that we want to get the best possible price notwithstanding the effect upon the carrier. That is exactly what the Government's position is. It is a very bad one.

Mr. COHELAN. Thank you.

Mr. SANDWEG. I will withhold my questions, and I will discuss some of these things with Mr. Erlich.

Mr. TIPTON. We will be glad to provide any other information.

Mr. KILDAY. We appreciate your coming and we thank you for your statement. It has been helpful.

AIR TRANSPORT ASSOCIATION,
Washington, D.C., August 4, 1959.

Hon. PAUL J. KILDAY,
House of Representatives,
Washington, D.C.

DEAR MR. KILDAY: I testified before your subcommittee on July 29, 1959. In my testimony I set forth the current all-cargo equipment plans of the U.S. scheduled airlines. In my discussion I failed to point out that Riddle Airlines has placed a provisional order for four Argosy transports. The Argosy is a British-manufactured airfreighter powered by four turboprop Rolls Royce engines, and is capable of carrying a 13½-ton payload. This aircraft is designed for intermediate range rather than overseas operation.

In addition, since my testimony Pan American World Airways has ordered 12 long-range Lockheed 207 turboprop airfreighters. This new cargo aircraft is to be powered by four General Motors-built Allison engines. The aircraft can operate nonstop in either direction across the Atlantic carrying a 35-ton payload. Pan American, as well as American and United, has also arranged to convert many of its present passenger-carrying DC–7C's into cargo configuration pending the delivery of its new airplanes.

I hope this letter can be inserted in the record at the conclusion of my testimony.

Cordially,

S. G. TIPTON, *President.*

STATEMENT OF S. E. SPICHER, PRESIDENT, SUPPLEMENTAL AIR CARRIER CONFERENCE

Mr. S. E. Spicher, president, Supplemental Air Carrier Conference.

Mr. SPICHER. My name is S. E. Spicher, president of the Supplemental Air Carrier Conference.

Mr. KILDAY. Would you like to be seated?

Mr. SPICHER. We are pleased to be here to show the present status of the supplemental air carriers, their potential and future development, and their ability to perform in case of an emergency.

Mr. VAN ZANDT. Would the witness tell us about this name "Supplemental Air Carrier Conference"?

Mr. KILDAY. I think he is just about ready to say that.

Mr. SPICHER. If it please the chairman, I would like to submit the statement we have prepared and since I know the time is valuable here, devote it to discussing what the supplemental air carriers actually do.

Mr. KILDAY. Without objection, the statement will be included in the record and you go ahead and summarize what portions you desire.

Mr. SPICHER. We appreciate this opportunity to tell you how the supplemental air carrier segment of the Nation's certificated airline industry is geared to support the national defense effort in the event of mobilization. Supplemental air carriers, Mr. Chairman, represent the most ready part of the Nation's transport system. Since 1951 supplemental air carriers have supplied a continuous airlift service to the military for movement of troops and cargo between camps in this country, operating an average of 5,000 such movements a year involving approximately 300,000 troops. At present almost 65 percent of our flights are made for the military.

Flight crews of certificated supplemental air carriers are highly proficient in military operations; aircraft already is equipped for troop movements. The vital role supplemental air carriers are performing now as a civil air arm of the military makes the industry an important weapon in the Nation's arsenal. In the event of mobilization, supplemental air carriers can answer the call in a matter of hours because they will not be facing a new and strange operation but one they are performing daily now. Since supplemental air carriers make but 10 regular scheduled route-type flights per month they are not restricted by high-priority, route-type commitments to answer a call from the military for airlift augmentation to meet an emergency. Supplemental air carriers, therefore, represent the only Ready Reserve civilian airlift capacity in existence today which is exercised daily in a wide variety of military operations.

To illustrate the point I am trying to make, I believe a brief explanation of how our organization matches military requirements with the facilities and equipment of certificated supplemental airlines will prove useful.

While SACC performs trade association functions in behalf of certificated supplemental air carriers, its most important work is serving as an agent through which supplemental airlines provide air transportation service to the Defense Department for troop movement.

Transportation requirements for groups of 15 or more come into the Washington headquarters of the Military Traffic Management Agency which provides traffic management service to the entire Defense Department within the continental United States.

SACC maintains an office at MTMA headquarters to deal directly

with the Agency. Through this office military requirements for air transport service are funneled to SACC's aircraft coordination center, maintained on a 24-hour alert basis, which acts operationally upon military requirements directed to it. The degree of responsiveness through this machinery is eminently acceptable in peacetime. More importantly, it represents a tried and successful structure, in-being, to meet any sudden transition to any emergency situation.

On an up-to-the-minute aircraft coordination board—see attached photograph—in the Washington headquarters of SACC, the location and availability of aircraft operated by supplemental air carriers is known at all times, as is data on flights underway, made, or pending. SACC maintains contact with military installations and major air carrier operating centers throughout the United States through a vast network of communications facilities.

At SACC we do not concern ourselves exclusively with day-to-day current operations. Important as our peacetime activities may be, we realize that certificated supplemental air carriers to be of real value to national defense must be responsive, instantly, to any national emergency. Readiness to meet wartime requirements to us means day-to-day readiness. Accordingly, we have a sign in our aircraft control center which reads "Today is D-day" and we conduct our daily operations under D-day conditions. Thus, meeting emergencies has become routine at SACC.

SACC then represents machinery, in-being, exercised every day, 7 days a week, 52 weeks a year, through which supplemental airlines provide airlift for the military. This authoritative liaison, established and in-being, between SACC and the military assures instant operational responsiveness to wartime military requirements under an infinity of conditions.

In the event of mobilization, no change in SACC's operation would be necessary. There might be a change in the defense office from which SACC would receive its orders. But when the bell sounds, orders would be dispatched from the Washington headquarters of SACC to every mobilized aircraft to report for duty at specified military bases under the same procedure we are now using to arrange peacetime movements.

Airborne troops and their full equipment for deployment of a division would thereupon be dispatched to arrive at any destination in the world within 48 hours. This instant mobilization is an essential factor of any civil mobilization program.

What we have is indispensable. It represents the only nucleus for positive rapid expansion into the necessary civilian airlift reserve to assure that on D-day we will have the airlift capacity we will need to meet wartime requirements.

It is a matter of record in testimony before the Holifield subcommittee of the House Government Operations Committee during the 85th Congress that the military airlift capacity which exists today represents only 60 percent of what we will need to meet military lift requirements in event of a war emergency.

This is a dangerous situation for our country to be in. Past experience has shown us that weakness in any phase of our national defense invites attack. We at SACC believe that the time to build up the airlift capacity we will need in an emergency is before the emergency occurs.

Given an assurance of $500 million in Government business each year over the next 4 years supplemental airlines can modernize and

expand their facilities and operations to the point where they can provide more than the 40 percent lift capacity now missing from our military structure.

We are now spending almost $1 billion a year to maintain 60 percent of the needed military airlift. Certificated supplemental airlines can do this because they will augment their military business with civilian business, just as they do now. There are of course tremendous economies to be gained by maintaining the airlift reserve which we are proposing here today. Wider use of certificated supplemental airlines will save time, money, material, and manpower, in addition to providing the necessary ready airlift at less cost than any other means.

We are spending an estimated $1½ billion each year to maintain our Ready Reserve Armed Forces. Commonsense then dictates that we must spend whatever is necessary to assure that we will have a means of getting these trained troops to the danger zone in time to put out a brush fire before it spreads into a world conflagration. If we do not have adequate means, then our aerial fire brigade is liable to arrive too late to put out the fire, or in strength too weak to be effective. The risk we are taking in not being able to meet the requirements of D-day 100 percent is that the free world will be nibbled away until we stand alone, an easy prey for our enemy, through all-out nuclear attack.

Many military experts believe that the Korean war, as we now know it, would never have existed if an adequate mobilizable civil airlift reserve was available in June of 1950. The theory of these officers is that this typical brush-fire war would never have reached conflagration size had a division of men and weapons suddenly been interposed before the invading North Koreans within 3 days. According to this theory, North Koreans would have been stopped at the border and they would have written off the venture as an unsuccessful border provocation. Instead, the strength of the U.S. Army was not felt for 60 days, during which time the North Koreans pushed the U.S. Army to the Pusan beachhead.

It has been a longstanding American tradition to have in being the smallest possible armed force consistent with national security requirements backed up by an adequate reserve force. This means of providing national defense is in keeping with our free enterprise traditions; it is the most economical, and it has a long history of success.

We have a sound and historic example in the civilian merchant marine which has been the backbone of sealift in every war in which this country has participated. The Navy has always trusted the civil merchant marine to respond to the most dangerous wartime assignment and this trust has been fulfilled. What we are proposing here is something similar to the sea merchant marine; an effective partnership, if you will, between the certificated supplemental air carriers and the Defense Department, working together in peacetime to achieve maximum economy in travel within the Government, and to assure a truly ready reserve civilian airlift capable of filling the military airlift gap with a minimum of delay in event of dire emergency.

Just as the Navy could count on the sailors and ships of the merchant marine to make dangerous voyages as they did to Murmansk and the Philippines, so can the military count equally well on the crews and planes of supplemental airlines to make emergency flights to any spot in the world.

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Representing only 5 percent of the Nation's air transport, supplemental airlines moved 25 percent of the passengers and 57 percent of the cargo tons carried by commercial airlines in the strategic Berlin airlift of 1948.

Again in 1950 supplemental air carriers answered the Nation's call to service and supplied over half the civilian augmentation for the Korean airlift. We stand prepared to step into the military airlift gap again, wherever and whenever needed.

The reason for the supplemental air carrier conference name is the supplemental air carriers—there are approximately 25 certificated supplemental air carriers that were certificated in January of this year.

This represents some several hundred that started in this business in 1946.

In certificating the supplemental air carriers, the CAB found them to be in the public need and one of the prime points brought out was their ability and their resourcefulness in being able to perform in the national defense.

To illustrate that I believe attached to the statement you will find a small photograph. I have a larger reproduction here. This depicts the method of operation today of the supplemental air carriers with one of the governmental agencies.

Mr. SPICHER. The Government agency that is illustrated is the Military Traffic Management Agency which is an agency created to coordinate the movement of military traffic, both passengers and cargo, within the continental United States.

The agency itself has five regional offices strategically located throughout the United States. Each regional office of MTMA in turn is in direct contact with various military installations in its region. As you know, the blue arrow depicts the five regional offices of MTMA which when alerted of a movement of personnel or cargo transmit the information directly to the MTMA office in Washington.

That in turn is directly connected to the supplemental air carrier conference office in downtown Washington by direct tielines.

When the requirement is transmitted from MTMA to the Washington conference office downtown, it in turn has a direct communication system with all the supplemental air carriers both by telephone and TWX service.

On this basis it is possible for aircraft to be in the air moving a military requirement within a matter of hours. And it is being done every day of the week, 52 weeks of the year, and this policy of operation has been followed and developed over the past 7 years. So we feel that the supplemental air carriers are the only truly ready reserve airlift that you have in the continental United States at this time, because of the fact that a major portion of the supplemental air carriers' business is directly with the military in moving of personnel and cargo from all miscellaneous points throughout the United States.

Based on this we question—I will explain somewhat the type of equipment we have. We have some modern equipment. The bulk of the equipment we have is not considered modern, at this time.

Mr. KILDAY. What types for instance?

Mr. SPICHER. The greatest quantity of equipment is the remanufactured "T" categoried C–46 type of equipment, DC–4 equipment, DC–6's. There are quite a few of those and some Boeings.

Mr. VAN ZANDT. Name a few of the carriers.

(The photograph is as follows:)

MILITARY TRAFFIC MANAGEMENT AGENCY
T-7
MILITARY TRAFFIC MANAGEMENT AGENCY REGIONAL OFFICE
SUPPLEMENTAL AIRLINE OPERATING BASE

Mr. SPICHER. The carriers that the Supplemental Air Carrier Conference represents are the United States Overseas Airlines, Columbia Associated Air Transport. There is a similar organization, the Independent Airlines Association, that represents the greater portion of the other group. What I am speaking of now is the supplemental air carriers themselves. The method of operation of the other associations I had with this on its communication system—the big reason that many of the so-called obsolete aircraft have not been phased out is that the requirements that come in every day, the so-called modern airplanes will not operate with a payload out of those airports.

For instance, this summer the bulk of the reserve training program personnel are moved by supplemental air carriers when they go by air. At the present time, although we agree with everyone else that for the stability of the aircraft manufacturers that old aircraft should be phased out, it is a frightening thought; it is sort of like living in a hurricane area and throwing away all of your candles rather than putting them in the storm cellar. Spare light bulbs won't do any good when the powerline is cut. The same thing exists when we go into more advanced airplanes and suddenly find less than 25 percent of the airports in the world will accommodate them. These aircraft, the C–46 and DC–4, are very efficient in their way of being able to carry a maximum load out of mininum and into minimum-sized fields. We would like to see those aircraft replaced with more modern aircraft that would do the same job. A typical example is the Logair and Quicktrans contracts. One is operated by DC–4's, Quicktrans, and the other is operated by the C–46.

Many of the airports that those aircraft operate into and out of would not pick up and carry the load in and out of the field because of its size.

We feel that these aircraft should not be phased out until such time as another aircraft is available to replace them. The CAM market, that is what MTMA handles, they are called CAMS, if we could find an aircraft that would replace the C–46, many of the carriers would like to do that. We have been unable to find an airplane that has a suitable range and will carry the load and operate out of the airport where the service is required.

That is about the extent of what I had to say. I would like to make the point that we actually do this every day. It has been going on since 1952. We have the ability to direct an aircraft that is in flight to a point and make a pickup in a matter of hours and proceed on the business for the military.

Mr. KILDAY. Does you company hold Logair contracts?

Mr. SPICHER. None of the companies with Supplemental Air Carrier Conference does. Some of the other companies with the Independent Airlines Association do.

Mr. KILDAY. That work is carried on by similar companies——

Mr. SPICHER. Yes; Capital Airways has a Logair. United States Overseas Airlines, a member of the contract, has a Quicktrans contract. It is operated with DC–4's and Logair is operated with C–46's.

We have to defend these aircraft not from the standpoint of saying that we have to have them in order to live. It is necessary that we do, but we would be glad to phase them out if there was an aircraft to replace them to do the job. Our alarm over the situation is to consider an aircraft obsolete before the replacement is available to do its job.

That about concludes all I would have to say on this.

Mr. KILDAY. Mr. Van Zandt.

Mr. VAN ZANDT. Does the Government have a contract with you in their program known as CRAF?

Mr. SPICHER. Many of the aircraft companies who are supplemental air carriers do have aircraft on the CRAF program.

Mr. VAN ZANDT. In the event of an emergency a percentage of the capabilities of the supplemental carriers would be made available to defense?

Mr. SPICHER. Yes, sir, to the extent that the supplemental air carriers do not have the utilization of the trunkline route carriers, and probably 50 percent of their utilization is never utilized even in their normal operation. Which, in effect, gives a standby reserve airlift immediately available in case of emergency.

The only thing that governs the amount of that airlift would be the size of the fleets of the supplemental carriers.

Mr. VAN ZANDT. I noticed that you participated in the Berlin and likewise the Korean airlift. What percentage of your capability was thrown into these two efforts?

Mr. SPICHER. Of the aircraft that were capable, by that I mean aircraft of overseas capability, I can give you an estimate; to my knowledge I would say that probably 80 to 90 percent of it was there.

Mr. VAN ZANDT. In the event of an emergency today or tomorrow, is it proper for me to say that 80 or 90 percent of your capability with overseas type of ships would be available to the Government?

Mr. SPICHER. That would be a fair statement. In canvassing the supplemental air carriers over the past years, and with the support that we are getting, we are getting good support in the continental traffic, and we get support on some of the MATS traffic as that has increased, and the supplementals grow. They are prepared not only to give you a partial percentage, but to guarantee you practically 100 percent of their lift in case of emergency because they are not tied down to any specific route commitments to the extent of more than 10 scheduled flights a month.

Mr. VAN ZANDT. I am pleased by the fact that you say that practically 100 percent of your capability would be available to the Government in event of an emergency. How about present-day operations, domestic operations? What percentage of your present-day operations are Government and what percentage are domestic?

Mr. SPICHER. At the present time for the entire supplemental carrier industry approximately 65 percent is Government and 35 percent is domestic. The ratio is rather high governmentwise, but even so the utilization is quite low. So there is quite a bit of capability that is not being used.

Mr. KILDAY. This is an interim point for these planes that are being phased out——

Mr. SPICHER. Yes. It is interesting to know, and I think you gentlemen should know that the C–46 that we operate commercially cost in excess of two hundred some twenty thousand dollars to license to operate commercially.

It is not a matter of buying one for a matter of fifty or sixty thousand dollars. It is remanufactured and meets full category requirements like a new DC–6 or other plane.

Mr. KILDAY. Other questions?

Thank you, Mr. Spicher.

Mr. SPICHER. We appreciate your committee's time.

Mr. KILDAY. This concludes our hearing this morning. We will adjourn until 10 o'clock tomorrow morning.

(Whereupon, at 11:55 a.m., the committee recessed, to reconvene at 10 a.m., the following day, Thursday, July 30, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

THURSDAY, JULY 30, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10:06 a.m., Hon. Paul J. Kilday (chairman of the subcommittee), presiding.

Mr. KILDAY. The committee will be in order. We will resume this morning with our hearings on the adequacy of transportation in the event of mobilization. I submit for inclusion in the record at the proper point a statement by Richard J. McMahon, commissioner, Maine Public Utilities Commission.

STATEMENT OF RICHARD J. MCMAHON, COMMISSIONER, MAINE PUBLIC UTILITIES COMMISSION

My name is Richard J. McMahon. I am a member of the Maine Public Utilities Commission, being appointed to my office on December 8, 1955. The Maine Public Utilities Commission is made up of three commissioners, one of which is designated as chairman by the Governor.

My office and the offices of the commission are located in the statehouse, Augusta, Maine. The Maine Public Utilities Commission is a legally constituted administrative body created by the State legislature and fixed by statute. The commission is empowered and it is its duty to regulate the rates and practices of the transmportation facilities within the State of Maine when such rates and practices, in its opinion, are unjust, unreasonable, or unjustly discriminatory or in any way inadequate, and to take such action as may be necessary to protect the interests of the State and its people.

Inquiries into the adequacy of our transportation system to meet the needs of the defense effort and mobilization are, in my opinion, long overdue. It is no myth that the public transportation facilities of the United States have been and still are the bedrock of our economy for it is elementary to say that manufactured and agricultural products are of no value unless they can be freely distributed in the market place. Similarly, it is no myth that public transportation facilities made an immeasurable contribution to the almost fantastic problem of logistics which faced the Armed Forces in the virtually worldwide conflict of World War II in which the United States found itself in the position of supplying not only manpower but materials including food supplies throughout the world. This feat is still an outstanding monument of establishment.

The problem which now faces the United States as a result of the continual shrinking of these public transportation facilities has been greatly underestimated and I believe has today reached proportions which seriously endanger our national security. One of the most important areas of this problem is the continual decline of passenger service by railroad and the resulting scrapping and dismantling of passenger carrying equipment. For example, in Maine our commission presently has before it two petitions from two of the State's largest rail carriers seeking the complete abandonment of passenger train service north and east of Portland. If the carriers are successful in removing this service, the heart of the State and all of its major population centers will be left with no such transportation services.

The applications for passenger train abandonment to which I refer are those filed by the Bangor & Aroostook Railroad and the Maine Central Railroad. These services and their effect upon the defense effort and national security are as follows:

THE BANGOR & AROOSTOOK

1. The area served is from Bangor, Maine, to Van Buren, Maine, serving the population centers of Millinocket, Houlton, Presque Isle, and Caribou.

2. The mileage involved from Bangor to Van Buren is 222 miles by railroad and approximately 200 miles by highway.

3. Equipment: (*a*) Two 2,000-horsepower diesel electric locomotives used almost exclusively in passenger service. However, any of its 35 owned locomotives are usable with passenger cars equipped with steam generators. This carrier has owned as many as three locomotives for use exclusively in passenger service.

(*b*) Coaches: The company presently operates two 75-passenger air-conditioned coaches and has owned as many as five coaches for this service.

(*c*) Sleepers: This company presently owns and operates two 26-passenger sleeping cars which were purchased new in 1954.

(*d*) Diners: The company owns three buffet cars, none of which are presently in service.

4. Passenger service operated: (*a*) The company presently operates one round trip daily except Sundays with coach and sleeping car connections for points beyond Bangor such as Boston and New York.

(*b*) In the most recent past, the company has operated two round trips daily, one trip carrying the sleeper service and the other exclusive coach service, both with connections for points south and west of Bangor.

5. In the area served by this carrier there are two large defense installations; namely, Loring Air Force Base at Limestone, Maine, and Presque Isle Air Force Base at Presque Isle, Maine. These bases are, of course, surrounded by smaller defense installations such as Nike and Bomarc sites.

6. The civil defense needs of the area could, because of the large defense installations located therein, require the evacuation of the civilian population notwithstanding the probable need of moving men and material to and from the defense installations.

MAINE CENTRAL RAILROAD

1. The area served by this carrier is generally from Portland, Maine, to Bangor, Maine, serving population centers of Brunswick, Gardiner, Augusta, Lewiston, and Waterville.

2. The mileage from Portland to Bangor is 136 miles by railroad and 134 miles by highway.

3. Equipment: (*a*) This carrier generally maintains seven diesel electric locomotives for use in passenger service. However, its freight locomotives, as is usually the case, are interchangeable and are sometimes used in this service.

(*b*) Coaches: The company presently has in service 20 passenger coaches whose seating capacity ranges from 44 (combination baggage-passenger coach) to a large coach accommodating 84 passengers.

(*c*) Sleepers: This company presently operates three sleeper-car lines, namely: from Bangor to New York, Boston to Van Buren via Mechanicsville and Portland to St. John, New Brunswick. None are owned by the company.

(*d*) Diners: This company does not own or operate any dining car service.

4. Passenger service operated: (*a*) This carrier is presently operating four round trips daily between Portland and Bangor with connections to Boston and New York and including one through train to New York and an international train from Boston to Halifax, Nova Scotia. One year ago this service consisted of six round trips daily including the New York train and the international train to Halifax.

5. In the area served by this carrier, there are also two large defense installations, namely, the Brunswick Naval Air Station and Dow Air Force Base at Bangor, Maine. Besides that, there is a shipyard installation at Bath, Maine, which constructs naval craft, Bomarc sites, and a SAGE installation.

6. The civil defense needs of the area include the major population centers of the State; namely, Bangor, Portland, Lewiston, Waterville, and Augusta.

Because of its location, this area could be both an evacuation area or an area to be evacuated in the event of a nuclear attack.

The Boston & Maine Railroad's position in the overall transportation needs of this State is of the utmost importance as it provides the basic connecting link, as it were, to and from Maine.

1. The area served by the Boston & Maine includes the area from Portland to Kittery.

2. The mileage of the Boston & Maine in the State of Maine constitutes approximately 40 miles from Portland to South Berwick. However, the mileage from Portland to Boston is 115 miles.

3. Equipment: (*a*) This company maintains eight diesel electric locomotives which are used for the most part in passenger service, three of which are generally in operation on the Portland division, namely, from Portland to Boston.

(*b*) Coaches: The Boston & Maine presently operates no conventional coaches on its Portland division, all conventional equipment being supplied by connecting lines. However, it does own and operate 108 so-called Budd cars—self-propelled—with the result that this carrier operates three daily trains between Portland and Boston utilizing so-called conventional equipment and two daily trains utilizing self-propelled Budd equipment.

(*c*) Sleepers: The Boston & Maine presently owns four sleeping cars, two of which are operated in service to and from Maine points, particularly on the Bangor-New York service.

(*d*) Diners: This company does not own or operate any dining car service.

4. Passenger service operated: The Boston & Maine presently operates five round trips daily between Portland and Boston, Mass. A year ago this service amounted to eight round trips daily.

5. The defense installations in Maine in this area comprise principally the Portsmouth Naval Shipyard located at Kittery, Maine.

6. The civil defense needs of the area connect two substantial population centers, namely, Portland and Boston, Mass. where transportation facilities for the evacuation of the civilian population would undoubtedly be necessary.

Other rail lines conducting passenger service in the State are the Grand Trunk Railway, East, owned and operated by the Canadian National Railways from Portland to Montreal and the Canadian Pacific Railway conducting passenger service across the State of Maine from Vanceboro to Megantic, Quebec, with connections to the Maritime Provinces and Montreal.

During the past 5 years, the State of Maine has seen a substantial decline in passenger service. For example, no branch-line passenger trains are now operated.

Here, I would point out that it is not my intention to bring the transportation problems of the State of Maine before this subcommittee. Certainly we are capable of keeping our own house. However, I do feel that our problems demonstrate what is happening pretty generally throughout the Nation. As a matter of fact, ours is no longer a problem. It is a fact that the rail carriers now feel that they must seek the complete abandonment of rail service in Maine north of Portland. Rather, this statement is intended to bring to the attention of the committee what we believe the problem to be and to offer what we believe to be constructive criticism and certain suggested remedies.

Needless to say, this problem was not created overnight. Rather, it is one that has grown steadily worse as the railroads, for one reason or another, have found it necessary to cease or drastically curtail passenger transportation services.

The resulting effect has been a serious diminution of railroad passenger equipment including motive power. I believe other testimony which you have seen and will see in this proceeding will clearly demonstrate the inadequacy of existing passenger facilities for defense needs. The carriers have undoubtedly been seriously affected by the loss of mail transportation contracts to highway transportation facilities and others.

Also, it is my opinion that the regulatory agencies at both the State and Federal levels have not been active enough in recognizing this serious problem and bringing it to the attention of the people. Criticism, I believe, also rightly belongs to the legislative branch of Government which has not taken all the steps possible to provide relief from burdensome taxes and regulation in certain areas. The present Congress, for example has refused to completely remove an excise tax on passenger fares which were clearly established to discourage passenger transportation during the war years when those facilities were overtaxed by military use.

It appears that both labor and management of the carriers must stand a certain amount of criticism for the present situation. It seems only logical that both must recognize that the time has come for some real action in this area and lastly, the final burden must be placed at the public doorstep. However, it is our duty to completely inform the public of the present situation and the vital need of these facilities for the national security.

It is my opinion that there are many areas in which this most serious problem can be relieved. For example, there is little doubt in my mind that the private

automobile and the airlines in that order have had the greatest effect upon the public use of the rail passenger facilities. The public bill for constructing and maintaining highways and airports has now reached almost astronomical proportions.

Obviously, private capital cannot be expected to long compete for the travel dollar under those conditions. Therefore, it is only reasonable and right that passenger fares should no longer be subjected to an excise tax to purposely discourage their use. Furthermore, the transportation of the U.S. mails has unquestionably suffered because of the removal of railroad passenger service. I believe that the transportation of the mails has had a real sustaining effect and should not be removed from rail service except as a last resort.

Regulatory agencies can also contribute by promptly permitting the discontinuance of unprofitable branch line operations. Labor and management, in the railroad industry, must become more aware of the economic facts of life and bring their agreements and contracts into conformity with the present day conditions. Much has recently been said and I believe is now under study by the Interstate and Foreign Commerce Committee about the desirability of a single agency to handle mail and so-called small or package shipments. It is my opinion that there is already in existence an agency equipped to perform this service on a national basis with the facilities and manpower already available to provide a complete service on this type of traffic, namely, the Railway Express Co. Here again, however, it is necessary for the railroads and the Government to exercise sound economic practices in providing and setting up such a service.

Because of the continual decline in railroad passenger equipment and if it is finally necessary to remove virtually all rail passenger service of a so-called long-haul nature, meaning other than commuter-type service, it would be my suggestion that the Federal Government seriously consider the possibility of purchasing or otherwise acquiring the existing railroad passenger equipment and, in effect, mothball and store this equipment at strategic locations to be available in a national emergency.

Obviously, these suggestions cannot be implemented without a great deal of study and legislative and administrative policy changes.

I believe it is desirable to retain as much railroad passenger service as possible under private ownership and management and as previously stated, I am equally convinced that much study of legislative and administrative policy changes must be made if we are to do so. I would, therefore, recommend that in the legislative field, first of all, that the excise tax on passenger travel by immediately removed and if necessary subsidies through mail contracts be offered to retain vitally needed railroad passenger service to serve our defense establishments and the most important civil defense needs. Also, the purchase by the Federal Government of all surplus passenger and allied service equipment to be stored and maintained at strategic locations. And finally, all Federal agencies such as the Post Office Department and the Defense Department should be ordered and allowed to appear and testify before any State or Federal regulatory commission whenever any hearing is held which could have any bearing on our national defense effort.

Respectfully submitted.

RICHARD J. MCMAHON.

VERIFICATION

STATE OF MAINE,
County of Kennebec, ss:

Richard J. McMahon, first having been duly sworn, deposes and says that the foregoing statement is true and correct to the best of his information, knowledge, and belief.

RICHARD J. MCMAHON.

Subscribed in my presence and sworn to before me this 28th day of July 1959.

ROY M. SOMERS, *Notary Public.*

My commission expires March 10, 1962.

Mr. KILDAY. This morning we have Mr. John V. Lawrence, managing director of American Trucking Association. I understood you have with you Mr. Sam Niness, Mr. E. F. MacMillan, and Mr. Morris Sterling. You have them all at the table with you?

Mr. LAWRENCE. Yes.

Mr. KILDAY. You may continue in your own way.

STATEMENT OF JOHN V. LAWRENCE, MANAGING DIRECTOR, AMERICAN TRUCKING ASSOCIATIONS, INC.

Mr. LAWRENCE. Mr. Chairman and gentlemen of the committee, my name is John V. Lawrence and I am managing director of the American Trucking Associations, Inc. Our offices are located at 1424 16th Street NW, Washington, D.C.

The American Trucking Associations, Inc., is a federation that was established in 1933 as the national trade association of the trucking industry, representing all types of motor carriers of property, both for-hire and private. We have affiliated associations in 48 States and in the District of Columbia. In addition, we have 12 affiliated national conferences representing different branches of the trucking industry.

We appreciate this opportunity to appear before you and to give our views on this most important subject. Other testimony concerning certain phases of the trucking industry will be given by representatives of our affiliated conferences.

The trucking industry today is the major form of domestic transportation. It carries more goods than do all other forms of transport combined. It is the only form of transportation capable of rendering a complete transportation service—hauling commodities of all types from point of origin to point of destination.

The performance of trucks during World War II established their importance to our national defense and the essential civilian economy. The achievements of the trucking industry during that period are so well known and documented that they need no elaboration here.

Today, however, the dependence of our Nation on trucks is much greater than it was at the outbreak of World War II. The influence of highway transportation in shaping our economy and way of life since the close of that conflict has been tremendous. Our burgeoning suburbs and the dispersal of our production and trade centers over ever-widening metropolitan areas are ample evidence of the changes in our way of living, producing, and distributing goods that have taken place because of the availability of efficient highway transportation.

Another indication of our greater dependence on trucks is reflected in the number in use today. As shown in table 1 there are 11 million trucks plying our 3 million miles of roads and streets serving every facet of our economy. This is more than double the number in use in 1941.

Any attempt to evaluate the capacity and capabilities of our national transportation system and its adequacy to support the national defense effort in the event of mobilization, must begin with an understanding of the unique position occupied by the trucking industry in this system.

Unlike the other forms of transport which offer essentially point-to-point line-haul services, the trucking industry performs a multitude of services not offered by any other mode. Some of the major types of these services are:

1. Governmental services: These include firefighting, garbage and trash removal, highway maintenance, sewer, water and similar services ordinarily performed by governmental agencies, Federal, State, and local.

2. Agricultural services: Include operations both on and off the highways in connection with farming, dairying, animal husbandry, and fisheries.

3. Extractive services: Include operations, both on and off highways, in connection with mining, quarrying, drilling, oil and gas production, and logging.

4. Constructive services: Include dump trucking, transit mixing and delivery of concrete, and services in connection with plumbing, heating, electrical work involved in erection or repair of buildings and other structures, including highways, bridges, etc.

5. Wholesale distribution services: Include distribution of goods, laundry, cleaning, and similar items of retailers, either from wholesale houses or between producers and retailers.

6. Consumer distribution services: Include the delivery of goods and services of all kinds directly to consumers.

7. Public utility services: Include transportation of men, materials and supplies for the purpose of installing, erecting, repairing, and maintaining telephone, electrical, gas, and other services of this type.

8. Terminal services: Include pickup and delivery services for all types of intercity line-haul carriers, railway, waterway, highway, pipeline, and air as well as warehousing and similar services.

One of the most common errors made in attempting to appraise the relative transportation capacity of the several modes of transport is the use of the ton-mile as the unit of measurement. The seriousness of this error is apparent from the fact that none of the services mentioned above contribute anything to the ton-mile total credited to the trucking industry.

This presents the problem of how to measure the importance of the services performed by more than 85 percent of the trucks in use. How to measure the importance of sanitation trucks? Of local fuel trucks? Of telephone trucks? Or even of local cartage trucks? The services performed by these vehicles are indispensable, but there is no overall yardstick to measure either their contribution to our economy and national defense, or their efficiency. In appraising their essentiality we must rely upon individual analysis of the various operations.

Table 1, which gives truck registrations in 1957 by visual type and kind of use, shows that the great bulk of trucks are relatively light vehicles owned and operated by private carriers including farmers and used in furtherance of some other business. While there is little doubt that some improvements in the efficiency of most of these operations could be effected, it should be kept in mind that no other transportation agency performs, or is capable of performing, these services, and the continuance must be provided for in planning for any emergency.

Determination of the role played by trucks in the field or line-haul transportation presents a different problem. Here trucks do perform some services which are similar to those performed by other types of transport and the question of how to measure the relative importance of the several media in the intercity freight transportation field becomes important. Here again the use of ton-miles leads to incorrect conclusions.

Table 2 gives the relative position of the various agencies in terms of intercity ton-miles for the period 1939 through 1958. It shows the increasing importance of the trucking industry over the years in terms of the portion of total intercity ton-miles handled. Today trucks are handling 21 percent of the total compared to 45 percent for railroads,

18 percent for pipelines, 16 percent for inland waterways, and less than 1 percent by airways. But this is not the whole story.

The ton-mile unit is inadequate as a means of measuring transportation services because it fails to reflect differences in either the types of commodities hauled or the extent of the services rendered. To illustrate, consider the difference between the types of the traffic and service rendered by the railroads and the trucklines.

More than 99 percent of the freight handled by the railroads is made up of the volume shipments (carload) and less than 1 percent consists of smll shipments (less-carload). On the other hand, small shipments make up a substantial portion of the tonnage handled by intercity trucklines, approximating more than 25 percent of the total. Small shipments, of course, require much more labor, vehicles, and so forth, per ton-mile than do volume shipments, regardless of the type of transport used.

Even on the volume shipments handled by the two agencies, there are important differences in types of traffic and service which make ton-miles useless for measuring relative efficiency.

Rail lines require shippers to load and unload carload shipments, while trucklines usually perform these services. Where shippers are not located on a rail siding to move goods by rail, they must load it into a truck, haul it to the rail team track and reload it into the car. If the receiver does not have a siding, he must do the reverse. Trucks, of course, pick up at point of origin and deliver at actual destination.

About half of the total ton-miles handled by the railroads consists of products of mines, coal, ore, and so forth, which are very heavy loading and produce high ton-mile per car-mile yields. These commodities can be mechanically loaded and unloaded requiring little in the way of labor. This coupled with the fact that they usually move in heavy concentration between fixed points, results in low overall cost in terms of equipment, manpower, and materials in relation to the ton-miles handled.

Many of the services performed by intercity trucks are highly specialized and integrated into the manufacturing and processing methods of the shippers. Trucks, because of their speed and flexibility, are able to move goods in the process of fabrication and thus have saved valuable time and expense that would be necessary if they were not available. For example, there are many instances where items such as aluminum and sulfur must be heated during their conversion from the raw to finished state. Under conventional procedures they are heated and refined, then cooled, cast, and shipped to the fabricator where they must be remelted before processing can continue. Trucks, by hauling the heated materials directly from the smelters to the manufacturers, eliminate both the time and expense involved in cooling and reheating.

Perhaps the best indication of the differences in the types of line-haul services performed by the two agencies, railroads and trucklines, can be found in the figures relating to average revenues per ton-mile. These figures reflect the value of the service to the shippers. As of 1957, according to the ICC (Transport Economics, November 1958), trucklines received an average of 6.113 cents per ton-mile, while the railroads received 1.445 cents per ton-mile, less than one-fourth as much. When it is considered that these average revenue figures represent amounts paid to the two agencies by shippers, most of whom

utilize trained traffic managers, it is obvious that the ton-miles of service performed by the two forms of transport are not comparable.

For the reasons enumerated above, it is felt that any attempt to measure our total domestic transportation load in terms of ton-miles, or to use ton-miles in an attempt to measure the relative importance of the several modes, would be dangerous.

Because of these variations it is necessary, in attempting to determine the capacity of any transport agency, in terms of equipment, manpower, fuel or materials requirements, to consider carefully the types of traffic and services involved. If any overall measure of importance is to be used, it would probably be better to use a value of service concept rather than a ton-mile concept. Such a unit takes into account the differences in the cost of service, which in turn reflect equipment, manpower, and materials needs to perform the total transportation job. When this basis is used an entirely different picture is presented than that which appears from the ton-mile data.

Table 3 shows the comparisons of ton-miles of intercity freight traffic handled by rail and highway carriers, and table 4 shows the comparison on a value of service basis. These tables show quite clearly that while the railroads handled 73 percent of the ton-miles of intercity freight handled by both rail and highway, that their revenues approximated only 47 percent of the revenues of the two agencies. This discrepancy in ton-miles and revenues was due chiefly to the difference in the commodities handled and the completeness of the service rendered.

Regardless of the type of unit used to measure the relative volume of intercity freight movement of the several transport agencies it is obvious that all forms of transportation are important to our national defense and civilian economy. Each has certain characteristics which give it a decided edge in handling certain types of traffic. The best interests of national defense would be served by coordination and cooperation between the several modes so that maximum efficiency would be obtained by all.

Insofar as the physical and economic condition of the trucking industry is concerned, the trucking industry is in sound condition at the present time.

There are about 11 million trucks in use today, more than double the number in use at the start of World War II. Despite this increase in size, however, there is not as much excess capacity in the fleet as existed at that time.

One reason for this is that the demand for truck services has been increasing so rapidly with our expanding economy that the industry has not accumulated excess vehicles.

Even though it has been buying new trucks at the rate of 900,000 per year over the past 10 years the average age of the fleet today is 7.2 years compared to 5.6 years in 1941. Thus it does not appear that the industry could survive any extended period without a continued flow of new equipment.

While tires, fuel, parts, and other supplies are adequate at the present time, these are likely to become shortage items in the event of mobilization. Steps must be taken to insure that they continue to be available so that the industry can continue to perform its essential services. Manpower supplies also must be assured to prevent any

lessening of the ability of the industry to fulfill its vital role in the defense effort.

Motor carrier terminal facilities also appear to be adequate at the present time, although there is always room for improvement in these facilities to keep them abreast of the latest technology. The high cost of financing has retarded improvements in this area as did the poor business conditions last year. On the whole, however, terminal facilities are satisfactory.

Our highway plant, which became seriously obsolete shortly after the close of World War II, is still inadequate to handle efficiently the tremendous volume of traffic, both passenger cars and trucks, which is being placed upon it. The Federal highway program, encompassing the National System of Interstate and Defense Highways, as well as the primary and secondary systems, begun in 1956, should cure most of these deficiencies provided that adequate financing is insured to keep the program on schedule without overburdening the users, and if the geometric design standards adapted for the system give proper recognition to the needs of national defense particularly with respect to overhead clearances.

Operating as it does, on the public streets and highways, the trucking industry is more stringently regulated than are the other forms of transport. There is little doubt that unrealistic size and weight regulations and discriminatory taxes in certain States and localities have retarded the growth of the industry in the past and continue to do so. In recent years, however, progress has been made in the liberalization of size and weight limits along more scientific lines. For example, this year the last five States, which were below the 50-foot length limit for tractor semitrailer combinations contained in the size and weight code of the American Association of State Highway Officials, came up to this standard. This means that now, for the first time, a tractor semitrailer combination 50 feet in length can be operated from coast to coast and from border to border.

The situation with respect to punitive taxes on trucks is also still a source of difficulty.

Studies are now being conducted by the AASHO and the U.S. Bureau of Public Roads with respect to the effects of vehicle sizes and weights on highways and desirable sizes and weights of trucks. These studies are due to be completed in 1961 and should do much to throw additional light on these subjects.

Under the conditions of competition within and between modes of transport existing at this time there are some excess transportation facilities available. This would permit the several modes of transport to absorb increased burdens over a short period. In the field of intercity freight movements any prolonged mobilization period would require additional equipment, manpower, and supplies.

The ability of the trucking industry to increase its capacity is not generally appreciated because of misunderstandings concerning the efficiency of its vehicles.

This is especially true when overall averages for trucking are compared to the averages for other forms of transport. There are great variations between the performance of units operated in the various types of service. Much of the intercity trucking is performed by private carriers and consists of extremely short haul, small volume movements.

Table 5 shows the variations in the average length of haul by type of carriers. The variations in the average load are indicated by the fact that while the private carriers handled 46.6 percent of total ton-miles they operated 73.2 percent of total vehicle miles.

Rather than the overall averages, the true efficiency and the potential of the trucking industry to expand its capacity is more accurately reflected in the performance of the carriers who are in the business of moving freight between cities.

Fortunately, detailed statistics are available for some of these carriers—the class I interstate common carriers of general freight and tank truck carriers.

These data on the performance of the class I common carriers of general freight are shown in table 6. They show that the intercity power units operated by these carriers averaged 63,000 miles per year with an average load of 11 tons for an average of 698,000 ton-miles per intercity power unit.

These motor carriers averaged, per freight-carrying unit, 400,000 ton-miles per year compared to 316,000 ton-miles per year for the class I line-haul railroads.

These figures were derived from 1957 data contained in "Transport Statistics in the United States," published by the ICC. The truck lines included here, operated 103,568 trailers and semitrailers in intercity service and they performed a total of 41,490 million ton-miles of revenue freight service. The rail lines, on the other hand, had an average of 1,953,532 freight cars on line during the year and they performed 618,193 million ton-miles of service.

The greater productivity of trucking is even more remarkable when the differences in the types of freight handled by the two agencies is considered. The average density of general freight moving by motor carriers is much lower than that moving by rail and, of course, the average load per freight-carrying unit is less. Despite these two factors the trucking industry's much greater utilization of equipment, in terms of vehicle miles per year, results in greater output per unit.

One of the most graphic illustrations of the relative ability of trucks to move freight in relation to its standing capacity is given in the report "Petroleum Transportation" of the Petroleum Council, dated February 1958.

This report shows that there were 3,327 tank trucks in use hauling liquid petroleum gas; these vehicles had an aggregate water capacity of 11,176,230 gallons. The railroads had 21,880 tank cars in liquid petroleum gas service with an aggregate water capacity of 253,738,000 gallons.

It also shows that the tank trucks handled 2,955 million gallons of liquid petroleum gas compared to 2,767 million gallons handled by the railroads. Thus the trucking industry hauled 265 times its standing capacity, whereas the railroads hauled only 11 times its standing capacity.

Because of this tremendous capacity per unit it is essential that provision be made to keep the truck and trailer production lines open in the event of mobilization.

Another reason that it is imperative that provision be made for keeping the trucking industry supplied with equipment, manpower, and other needed supplies, is the possibility that our country may be attacked. In this event, it is probable that the main burden of

domestic transport will fall upon the trucking industry. The flexibility and speed with which trucks can transport goods, coupled with the fact that they can be operated over relatively rough terrain without the need for fixed facilities, would make them indispensable under adverse conditions of attack.

Some final comments that we would like to offer relate to the activities of the Federal Government in connection with transportation planning for defense.

We in the trucking industry have cooperated fully with the several agencies charged with defense transport planning, however, we have found a lack of continuity in such planning. I refer particularly to the civilian side and not the military.

Over the years since World War II the civilian agencies with which we have dealt unsuccessfully include the Office of Defense Transportation, National Security Resources Board, the Office of Civil Defense, the Defense Transport Administration, the Transport Mobilization Staff of the ICC, and the Office of Defense Mobilization. These are in addition to the military with which we have maintained, and continue to maintain, liaison.

This lack of continuity in civilian defense transport planning has seemed to us to be wasteful and dangerous.

The trucking industry, through ATA, maintains an industry mobilization committee for the purpose of providing liaison with the military and other appropriate Federal agencies. This committee is comprised of representatives of the national federation and each of the 12 affiliated conferences.

At the present time this committee is working with the Military Traffic Management Agency in its planning for emergencies.

In summary, it is our feeling that the best way in which to keep our overall transportation plant in the best possible physical condition to meet an emergency is to continue the policies of fair competition between modes of transport, which have brought our Nation the finest transportation system in the world.

We would also like to suggest that Federal defense transport planning activities be provided on a more continuous basis, and that carrier representatives be kept fully informed as to plans and the role they will be expected to play in any emergency.

In closing we would like to thank you for this opportunity to appear before this committee on this vital subject and to assure you of our desire to cooperate in any way possible in the interest of national defense.

(The charts attached to Mr. Lawrence's statement are as follows:)

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TABLE 1.—*Truck registrations in 1957 by visual type and kind of use*

Visual type	Private	For-hire	Publicly owned			Total
			Federal (civilian only)	State, county and municipal	Total	
Single unit trucks:						
2-axles, 4-tires	6,519,112	174,538	41,783	194,055	235,838	6,929,488
2-axles, 6-tires	2,628,089	347,621	33,394	203,750	237,144	3,212,854
3-axles	135,540	36,877	1,540	10,374	11,914	184,331
Total single unit trucks	9,282,741	559,036	76,717	408,179	484,896	10,326,673
Combinations:						
With semitrailers:						
3-axles (2-S1)	128,066	99,163	824	2,208	3,032	230,261
4-axles (2-S2)	122,990	136,510	109	3,536	3,645	263,145
5-axles or more (3-S2)	22,630	31,245	----	590	590	54,465
With full trailers:						
3-axles (2-1)	18,743	2,012	----	2,076	2,076	22,831
4-axles (2-2)	17,647	3,722	----	1,482	1,482	22,851
5-axles (2-3)	1,620	459	----	63	63	2,142
6-axles or more (3-3)	1,167	2,110	----	5	5	3,282
With semitrailers and full trailers:						
5 axles (2-S1-2)	4,934	8,581	----	----	----	13,515
6-axles (2-S1-3, 2-S2-2, 2-S1-2)	1,248	2,036	----	----	----	3,284
7-axles (2-S2-3, 3-S2-2)	103	443	----	----	----	546
8-axles or more	41	89	----	----	----	130
Total combinations	326,457	296,773	993	9,978	10,911	634,141
Total all trucks and combinations	9,609,198	855,809	77,650	418,157	495,807	10,960,814

Source: H. Doc. No. 91 (86th Cong., 1st sess.) Third Progress Report of the Highway Cost Allocation Study, table 2.

TABLE 2.—*Ton-mile and percentage distribution of intercity freight traffic, public and private, by kind of transport agency, 1939–1958*

Year	Railroads and electric railways, including express and mail		Motor vehicles [1]		Inland waterways including Great Lakes		Pipelines (oil)		Airways (domestic revenue service) including express, mail and excess baggage		Total	
	Millions of ton-miles	Percent of total	Millions of ton-miles	Percent of total	Millions of ton-miles	Percent of total	Millions of ton-miles	Percent of total	Millions of ton-miles	Percent of total	Millions of ton-miles	Percent of total [2]
1939	338,850	62.34	52,821	9.72	96,249	17.71	55,602	10.23	12	0.002	543,534	100.0
1940	379,201	61.30	62,043	10.03	118,057	19.08	59,277	9.58	14	.002	618,592	100.0
1941	481,756	62.40	81,363	10.54	140,454	18.19	68,428	8.86	19	.002	772,020	100.0
1942	645,422	69.47	59,896	6.45	148,565	15.99	75,087	8.08	34	.004	929,004	100.0
1943	734,829	71.26	56,784	5.51	141,652	13.74	97,837	9.49	53	.005	1,031,185	100.0
1944	746,912	68.63	58,264	5.35	150,155	13.80	132,864	12.21	71	.007	1,088,266	100.0
1945	690,809	67.26	65,948	6.52	142,737	13.90	126,530	12.32	91	.009	1,027,115	100.0
1946	602,069	66.61	81,992	9.07	123,973	13.72	95,727	10.59	93	.010	903,854	100.0
1947	664,523	65.24	102,095	10.02	146,714	14.40	105,161	10.32	158	.016	1,018,651	100.0
1948	647,267	61.94	116,045	11.10	[3] 161,846	15.49	119,597	11.44	223	.021	1,044,978	100.0
1949	534,694	58.38	126,636	13.83	139,396	15.22	114,916	12.55	235	.026	915,877	100.0
1950	596,940	56.17	172,860	16.27	163,344	15.37	129,175	12.16	318	.030	1,062,637	100.0
1951	655,353	55.63	188,012	15.96	[3] 182,216	15.47	152,115	12.91	379	.032	1,178,075	100.0
1952	623,373	54.48	194,607	17.01	168,357	14.71	157,502	13.76	415	.036	1,144,264	100.0
1953	614,199	51.01	217,163	18.04	[3] 202,439	16.81	169,884	14.11	413	.034	1,204,098	100.0
1954	556,557	49.50	214,626	19.09	[3] 173,679	15.45	179,203	15.94	397	.035	1,124,462	100.0
1955	631,385	49.41	226,188	17.70	216,508	16.94	203,244	15.91	481	.038	1,277,806	100.0
1956 [4]	655,891	48.22	253,751	18.66	219,978	16.17	229,959	16.91	563	.041	1,360,142	100.0
1957 [4]	626,222	46.31	260,856	19.29	231,792	17.14	232,660	17.21	601	.044	1,352,131	100.0
1958 [5]	562,000	44.98	260,000	20.81	197,000	15.76	230,000	18.40	575	.046	1,249,575	100.0

[1] ICC motor-vehicle ton-mile revisions, 1940 through 1955, based on changes in basic data from U.S. Bureau of Public Roads to include additional turnpike and local rural-road ton-miles.

[2] Variations in totals result from rounding.

[3] Part of this increase resulted from coverage of waterways previously existing but not included.

[4] Revised.

[5] Estimated.

Source: Bureau of Transport Economics and Statistics, Interstate Commerce Commission, table 2, statement No. 568, and 71st and 72d annual report. Estimates for 1958 assembled by research department, American Trucking Associations, Inc.

TABLE 3.—*Comparison of intercity ton-miles by railway and highway, 1940–58*

[In millions]

Year	Railways	Highways, ICC regulated [1]	Highways, non-ICC regulated	Total highway	Total railway and highway	Percent of total (railway and highway)			
						Railways	ICC regulated	Non-ICC regulated	Total highway
1940	379,201	20,683	41,360	62,043	441,244	85.9	4.7	9.4	14.1
1944	746,912	27,253	31,011	58,264	805,176	92.8	3.4	3.8	7.2
1948	647,267	46,706	69,339	116,045	763,312	84.8	6.1	9.1	15.2
1952	623,373	70,843	123,764	194,607	817,980	76.2	8.7	15.1	23.8
1955	631,400	75,119	151,081	226,200	857,600	73.6	8.8	17.6	26.4
1956	655,891	83,015	170,736	253,751	909,642	72.1	9.1	18.8	27.9
1957	626,222	84,260	176,596	260,856	887,078	70.6	9.5	19.9	29.4
1958	562,000	85,000	175,000	260,000	822,000	68.4	10.3	21.3	31.6

[1] Does not include intercity ton-miles of carriers classified as "local."

TABLE 4.—*Comparison of revenue from intercity freight service by railway and highway, 1940–57*

[In millions]

Year	Railways	Highways, ICC regulated [1]	Highways, non-ICC regulated [2]	Total highway	Total railway and highway	Percent of total (railway and highway)			
						Railways	ICC regulated	Non-ICC regulated	Total highway
1940	3,537	691	691	1,382	4,919	72.0	14.0	14.0	28.0
1944	6,999	1,079	694	1,693	8,692	80.5	12.4	7.1	19.5
1948	7,976	2,350	1,745	4,095	12,071	66.1	19.5	14.4	33.9
1952	8,798	3,901	3,409	7,310	16,108	54.6	24.2	21.2	45.4
1955	8,538	4,727	4,798	9,525	18,063	47.3	26.2	26.5	52.7
1956	9,079	4,981	5,122	10,103	19,181	47.3	26.0	26.7	52.7
1957	9,049	5,224	5,474	10,698	19,747	45.8	26.5	27.7	54.2

[1] Excludes revenue from intercity service of carriers classified as "local."
[2] This is a hypothetical figure based on a valuation of service by non-ICC regulated carriers of ½ the average revenue per ton-mile of ICC regulated carriers. It is an extremely conservative estimate of the value of intercity highway freight service.

TABLE 5.—*Interstate and intrastate ton-miles and vehicle-miles and average trip lengths of carriers with ICC authorizations, other for-hire carriers, and private carriers, on main rural roads, by single-unit trucks and combinations, 1955*

Type of carrier and movement	Ton-miles			Vehicle-miles			Length of trip (miles)		
	Single-unit trucks	Truck combinations	Total	Single-unit trucks	Truck combinations	Total	Single-unit trucks	Truck combinations	Total
ICC authorized:	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*			*Thousands*
Interstate	1,196,857	43,813,568	45,010,425	450,297	5,204,473	5,654,770			
Intrastate	1,395,710	13,891,315	15,287,025	883,860	2,191,053	3,074,913			
Total	2,592,567	57,704,883	60,297,450	1,334,157	7,395,526	8,729,683	23.55	116.56	102.30
Other for hire:									
Interstate	788,463	6,225,131	7,013,594	420,328	742,173	1,162,501			
Intrastate	3,654,815	11,334,959	14,989,774	1,523,026	1,211,211	2,834,237			
Total	4,443,278	17,560,090	22,003,368	2,043,354	1,953,384	3,996,738	17.86	68.96	42.90
Total for hire:									
Interstate	1,985,320	50,038,699	52,024,019	870,625	5,946,646	6,817,271			
Intrastate	5,050,525	25,226,274	30,276,799	2,506,886	3,402,264	5,909,150			
Total	7,035,845	75,264,973	82,300,818	3,377,511	9,348,910	12,726,421			
Private:									
Interstate	6,198,618	20,948,353	27,146,971	4,714,880	2,868,825	7,583,705			
Intrastate	25,252,599	19,349,237	44,601,836	24,080,501	3,090,548	27,171,049			
Total	31,451,217	40,297,590	71,748,807	28,795,381	5,959,373	34,754,754	13.02	76.65	23.87
Private and for hire:									
Interstate	8,183,938	70,987,052	79,170,990	5,585,505	8,815,471	14,400,976			
Intrastate	30,303,124	44,575,511	74,878,635	26,587,387	6,492,812	33,080,199			
Total	38,487,062	115,562,563	154,049,625	32,172,892	15,308,283	47,481,175	13.76	94.94	39.89

Source: U.S. Interstate Commerce Commission, "Truck Traffic on Main Rural Roads 1955," statement No. 5710, p. 2.

TABLE 6.—*Number of intercity power units—Average annual miles operated, ton-miles, and tons transported, per power unit, and average load and length of haul—Class I common carriers of general freight by regions, 1957*

	Number of intercity power units operated	Annual averages per power unit			Average (tons per mile loaded and empty)	Average haul (miles per ton)
		Miles operated	Tons transported	Ton-miles		
New England	3,133	38,067	1,838	309,668	8.13	174
Middle Atlantic	11,918	47,389	1,872	509,775	10.76	275
Central	17,765	61,990	2,301	712,007	11.49	316
Southern	9,034	72,302	1,775	765,980	10.59	432
Northwestern	2,597	62,024	2,503	593,438	9.57	243
Midwestern	3,413	78,313	2,089	773,320	9.87	401
Southwestern	4,875	64,345	1,843	664,523	10.33	368
Rocky Mountain	1,741	125,031	1,829	1,558,127	12.46	852
Pacific	4,961	74,073	3,126	956,080	12.91	307
United States	59,437	63,356	2,126	698,054	11.02	334

Source: "Transport Statistics in the United States," pt. 7.

Mr. KILDAY. Thank you, Mr. Lawrence.

What was your proposal as to providing further? Do the other gentlemen have any statements to make?

Mr. LAWRENCE. Might I say at this time that there are a number of our conferences I mentioned who have prepared statements. If I could just at this point submit them for the record so the committee will have the benefit of these.

Mr. KILDAY. They will be included in the record.

Mr. LAWRENCE. Mr. Fayle, Mr. William McDade, Mr. William E. Patterson, Mr. Cole, and Mr. C. J. Williams.

Mr. KILDAY. They will all be included in the record at this point.

(The statements are as follows:)

STATEMENT OF WILLIAM L. FAYLE, SECOND VICE CHAIRMAN, PRIVATE CARRIER CONFERENCE OF ATA

My name is William L. Fayle. I am second vice chairman of the Private Carrier Conference, Inc., of American Trucking Associations, Inc., and director of transportation, Burlington Industries, Inc., Greensboro, N.C.

The Private Carrier Conference, Inc., is an independent, autonomous association affiliated with the ATA. Its membership is composed solely of companies which operate motortrucks in the furtherance of their principal business of manufacturing, distribution, agriculture, and the service trades. The conference membership stands at 3,150 as of this date.

Perhaps it might be desirable at the outset to identify the private carrier. It would greatly simplify matters if we could type him and tell you the kind of individual he is. Unfortunately, such a composite picture is about as difficult of attainment as is an all-embracing definition of a Democrat or a Republican. He is a farmer, rancher, or cattleman. He is the man who runs the corner grocery store and delivers food to your door. He is your milkman or your breadman; he is the little businessman and the multimillion-dollar corporation. He may, as an incident to his major activity, haul peanuts or petroleum, pigs or pig iron, face powder or furniture, bread or batteries, the cargo may be bulky or compact, hot or cold, wet or dry.

Throughout this tremendous and heterogeneous group prevails one common need—the necessity in the course of their various enterprises of getting materials, supplies, and products from here to yonder. Basically, all of them are shippers. That they may use their own vehicles to transport their own products is an incident. If they do so, and only if they do so, do they become proprietary operators.

And yet, even though the private carrier is an incident, a means to an end, rather than the end itself, collectively he is a most potent factor in the American economy, for highway transportation is one of the most vital parts of this economy.

In this connection it will be helpful to the committee to have some general appraisal of the number of trucks operating in the United States and of the overwhelming number of such trucks which are owned and operated by private carriers.

In 1957 there were 10,900,000 trucks registered in the United States which set a new all-time record for registrations. It has been reliably estimated that 85 percent of the trucks of the United States are engaged in private carriage. Thus, it is that we have private carriers using trucks in all of the almost endless variety of services which go to make up what we choose to call the American economy.

Some breakdown of the private carrier use of trucks will be of interest to the committee. For instance, in food distribution, including bakeries, dairies, and other food products, there is a total of 4,560 private truck fleets of 2 or more vehicles. In construction and mining, there are 6,219 private truck fleets of similar size, 1,759 operated by manufacturers, 1,401 operated by the petroleum industry, 1,725 in public utility use, and 2,904 in retail deliveries other than food, all such fleets numbering 12 or more.

Farm registration of motortrucks in 1957 was 2,900,000, and it is interesting to note that 55 percent of products of agriculture move directly to markets in trucks. Direct truck hauls to market include grains, fruits, vegetables, livestock, milk, cotton, poultry and eggs, tobacco, and miscellaneous groups of crops. According to a survey conducted by the U.S. Department of Agriculture, 57 percent of fruits and vegetables alone were received by truck at leading markets. During the 1956–57 season, 65 percent of Florida citrus fruits shipped out of State and 70 percent of Florida vegetables were shipped by truck. Hauled by truck are 34 percent of all fishing products and 75 percent of all animal products.

According to the Bureau of the Mines, 80 percent of sand and gravel and 54 percent of crushed stone shipments were hauled by truck in 1956. The Department of Agriculture estimates that over half of the major markets of the United States received over 75 percent or more of their livestock shipments by truck. The same source estimates that 85 percent of livestock receipts at stockyards were hauled by truck.

Not all of these movements were by private carrier, to be sure. However, it is safe to say that the goodly majority of these movements were by private carriage. The U.S. Bureau of Public Roads estimate that private trucks haul 73.20 percent of the total truck mileage on main rural roads, and 46.58 percent of the total ton-miles hauled on such roads. Thus it is that privately owned and operated truck fleets of bakeries, food stores, and dairies and meatpackers and refiners and public utilities bring to American markets everywhere the vast flow of goods and commodities which go to make up our American way of life.

Perhaps a brief outline of the truck operations of our own company, Burlington Industries, Inc., would be found of interest. At the present time our transportation department employs 1,116 people. Our fleet totals 166 tractors and 335 trailers. Burlington operates a total of 110 plants in 80 geographical locations scattered broadly over the United States. We are a major supplier of fabric for every type apparel for the home and industrial use. We are the largest weaver of manmade fabrics, of worsteds and woolens, of glass fabrics—the largest of hosiery manufacturers, and one of the largest factors in cotton textiles.

Our truck fleet moves our goods in process between our various manufacturing plants, brings in raw materials, and delivers finished products to our customers. We operate from Boston to the South to the west coast. We have 14 terminals located in Connecticut, New York, New Jersey, Virginia, North and South Carolina, Tennessee, Georgia, Texas, and California. Our trucks serve as a conveyor belt in a production line moving goods between our various plants for various stages of processing, such as dyeing, bleaching, weaving, finished, etc. On return hauls, we bring back cotton from the Texas and Delta areas to using plants. We bring back domestic wools from the West to production plants in the South and East.

In the event of mobilization, we believe that the tremendous transportation capabilities of the private motor carriers can be used to great advantage. Undoubtedly it would be necessary to assign certain of such vehicles to regional pools where liaison existed between the military and civilian defense units. Critical materials, such as tires, tubes, fuel, parts and accessories could be assigned to such pools on a priority basis for the transportation of vital materials of war. Civilian drivers and other truck personnel would be drafted into such pools along with private trucks. These pools should be military installations with ground force protection and air defense at all times.

It is important to emphasize to this committee that most assuredly the private carriers will go to war along with all of the other modes of transportation. As we have previously demonstrated, the private carrier is the most important transporter of commodities numerically in the United States today. There would be an enormous reservoir of trucks, spare parts, tires, and other equipment which would be a national asset in such an emergency. These trucks would have remarkable versatility and could be used in a variety of ways to serve the national interest.

We must keep in mind, however, that just as the private carrier is essential in support of our American way of life in time of peace, so also would he be essential in the event of war. Rather should we think at this time of ways and means of making more efficient and more useful the equipment and the services which would be thus put at the disposal of the controllers of national transport in emergency. To this end, we wish to point out in a constructive manner to this committee that careful thought and attention should be given now to plans for eliminating the artificial restraints and restrictions on private carriage which are costly and excusable during peacetime but which would be disastrous and indefensible in the event of war. We speak of the artificial restraints on sizes and weights of motor vehicles and the shocking lack of uniformity in this field which now constitutes almost a national disgrace. We think also of the "witches' brew" which has been concocted by the various States in the reciprocity field. Here, again, we have artificial limitations on our transport plant which could not be tolerated in the event of war. We think, also, of the variety of burdensome third-structure taxes which constitutes a continuous harassment to motor transport and which have been very largely enacted as a result of competitive pressures of other types of transportation which have sought to make us less efficient and less able to perform as highway transporters.

We think also in this connection of the leasing restrictions of the Interstate Commerce Commission which would have to be reviewed and revised in order to reinstitute once again the trip-leasing arrangements which have now been outlawed. Trip leasing was born of the last Great War and it would be an essential in the event of future war. All of these things must be considered carefully now by this committee so that plans may be made to meet these problems in the event of emergency.

If these restrictions which we have been discussing were eliminated, we would automatically and dramatically increase the total capacity of our motor transportation plant and without drawing on critical materials and supplies and manpower in order to accomplish this expansion of facilities. Therein would like a secret weapon against the enemy which now we must forge.

The Private Carrier Conference has been following the testimony of other witnesses who have appeared before this committee. We have noted with gratification that Chairman Kenneth H. Tuggle, of the Interstate Commerce Commission has reported to you that: "In the motor carrier property-carrying field, the overall transportation is currently satisfactory * * * although the growth of the trucking industry has kept pace with the balance of industry there is little unused cargo space available. Greater availability of such transport would have to come from more intensive usage of what is available."

We note also that Leo A. Hoegh, Director of OCDM, has confirmed the healthy status of all highway transportation which must include, of course, the private carrier, who constitutes the large segment of highway transportation. But he, too, wisely in our view, has underlined the fact that some surplus capacity could be tapped by the elimination of barriers of law limits and licenses which restrict interstate movements and which should be madeu niform within the physical capacities of highways and bridges.

In conclusion, the Private Carrier Conference pledges to this committee its best efforts in attempting to work with any group which may result as a result of your deliberations and which will give thoughtful and careful attention to the problems of domestic highway transportation in the event of an emergency. Nothing could be more important than keeping in a high state of preparedness the Nation's highway transportation system in the event we are required to meet and vanquish an enemy.

Statement of William McDade, President, Heavy Specialized Carriers Conference

Mr. Chairman, thank you for the opportunity for making this statement on the effectiveness and ability of the heavy specialized type of motor carriers to meet the probable needs of our Nation in event of a national emergency.

My name is William McDade. I am the president of the McDade Transfer Corp. of Baltimore. I am also the president of the Heavy Specialized Carriers Conference of the ATA, a corporation, representing our specialized type of motor carriers in national affairs.

Our principal part of the national transport system is in the handling of articles or commodities that require the use of some special service or handling not usually provided by carriers of ordinary articles of commerce.

For example, some of the articles we handle for the armed services would be things such as the great Atlas missile as well as all other types of missiles; planes, plane engines and parts, radar towers and equipment; tanks and armored vehicles; trucks and fieldpieces.

Specialized carriers generally engage in both transportation and erection work. For example, my company handled materials to and installed many of our Nike (missile) launching sites, together with radar towers and equipment. Other members did much of the same type work on the DEW—distant early warning—line installations.

In commercial work, we transport all sorts of machinery, plant equipment, and supplies, together with articles that require special equipment as cranes, winches, and other such special equipment to complete loading and unloading. Rolling stock consisting of trucks, tractors, and trailers specially constructed to handle objects weighing from a few hundred pounds to 200 tons or more.

It is my carefully considered opinion that in a national emergency we can be counted upon to effectively and efficiently handle a tremendous amount of essential military supplies, ordnance, radar, plant machinery, and other necessary and essential items together with machinery, equipment, and supplies essential to civilian needs and production of war materials.

Our effectiveness will only be limited or partially destroyed by loose planning or diversion of our specially constructed equipment or essential highly skilled personnel to less important forms of transportation or use.

I base my opinion on a factual condition or situation perhaps without parallel in other types of motor carrier transport. This condition arises from this principal factor:

In 1947, a small number of our type carrier began work on a pool of carriers and equipment that would get two things done—(1) provide for the quick movement of an article between any two points in the United States without change of equipment or driver. This operation has been approved by the Interstate Commerce Commission and has grown in popularity and demand from year to year. This operation is accomplished through the red book interchange plan of the Heavy Specialized Carriers Conference. Due to its simplicity of operation it can be of tremendous value in the quick dispatch of a much-needed missile, piece of radar equipment, and other such items.

(2) This same red book plan creates a pool of carriers and equipment as cataloged in the red book which enables members to accomplish a quick assembly of special equipment and personnel at any given point.

When tested by the armed services it was found quite satisfactory. Within this pool of equipment cataloged by the red book will be found all sorts of equipment such as cranes, designed to handle, other than transportation, objects weighing from a few hundred pounds to many tons—or to lift them a few feet or several hundred feet.

With this well-designed cataloging of special equipment, the task force is established and the foundation laid for any expansion essential to meet a wartime emergency provided its effectiveness is not destroyed by unwise legislation or regulation incompetently administered.

To accomplish this purpose, we offer our services wherever and whenever needed.

STATEMENT OF WILLIAM E. PATTERSON, ASSISTANT TRAFFIC MANAGER, THOMAS J. DOWNING SONS CO., BUFFALO, N.Y.

This statement is submitted on behalf of the Local Cartage National Conference, one of the several conferences that are affiliated with the American Trucking Associations, Inc.

The motor carriers represented by this conference are those which operate primarily within one commercial area, either as an extension of the various forms of long haul transportation or performing a complete service for customers within the area. As such, we are ready as an industry to handle 30 to 40 percent more

traffic with our present manpower and facilities or as much as 100 percent more with added manpower provided our services were limited to our present type operations.

If, however, the emergency was of a different nature and was caused by an enemy attack on one of our commercial areas, the industry could be mobilized and ready to perform as an active arm of transportation for either the military or civil defense agencies in any given area of the country in a relatively few hours.

We could accomplish this by using the present dispatch system now being used by each company if it were tied in with either the military or civil defense headquarters in each area by some central means of communication.

It would only be a short time after the start of an emergency that the number and types of vehicles that would be available could be determined and also dispatched to wherever needed.

Another system that could be used would be that, in the event of an attack, drivers would be under permanent order to proceed to specified areas and place themselves under the designated agency in command.

Due to the highly diversified types of equipment used by our branch of the industry, it would be suitable for every kind of transportation needed, i.e., ambulances, evacuation and troop, military supplies, and heavy machinery movements.

It must be remembered, however, that the ability of the industry depends on the availability of communication and a reserve of fuels and lubricating oils and greases if the present systems and supplies are destroyed.

STATEMENT OF JACK B. COLE, PRESIDENT, JACK COLE CO.

My name is Jack B. Cole. I live in Birmingham, Ala., and I am the president of a truck transportation company bearing my name which is located at 1900 Vanderbilt Road, Birmingham, Ala.

I am very happy to have been given the opportunity of filing this statement before your Subcommittee on Transportation, and want to applaud your inquiry into the present adequacy of the country's several transportation systems, particularly as that transportation relates to times of emergency.

This can best be done on my part by telling you something about the Jack Cole Co. As shown in exhibit No. 1, attached, we operate in 11 States under certificates of public convenience and necessity authorized by the Interstate Commerce Commission. For the most part, we are authorized to render general commodity service between all points shown in this exhibit with certain exceptions where we only have authority to haul specific commodities.

To help us render a more efficient service for our customers, we have established 13 company terminals. These are listed in exhibit No. 2, together with a listing of the other facilities we use. This type of organization gives me a daily check and control over all phases of our operation.

In terms of personnel, the Jack Cole Co. employs a total of 749, classified as shown below:

Over-the-road drivers	229
Pickup and delivery drivers	105
Helpers and checkers	99
Clerical (terminals)	88
Salesmen	28
Mechanics	75
Safety	4
General office	121
Total	749

The equipment inventory of rolling stock is listed below:

GMC diesel-powered tractors, model D.F. 860	119
White, GMC and International gasoline-powered pickup and delivery units	120
Trailmobile and Great Dane trailers	390
Service cars	6

Our general maintenance setup is a complete shop located at our headquarters in Birmingham, where we do all our own rebuilding of engines, transmissions, running gear, etc. Maintenance work for our pickup and delivery trucks is performed at the various terminal points we serve—they are listed on exhibit No. 2.

We are geared to a preventative maintenance setup which is determined by experience and the best practices in the industry. This is true, not only of our power equipment, but also our trailers.

You will be interested in the steady growth of our company as shown by the steady increase in our revenue and tonnage figures as shown below:

Revenue:		Tonnage:	*Pounds*
1956	$6, 258, 082	1956	386, 186, 000
1957	7, 650, 224	1957	468, 323, 589
1958	8, 235, 482	1958	501, 194, 258
1959 [1]	4, 738, 841	1959 [1]	268, 824, 324

[1] Figures for 1st 6 months of year.

In time of emergency, I think it fair to say that we could increase our tonnage figures by something like 20 percent without detracting from our present safety and maintenance schedules. This can be done, I know, because of my long experience in the truck transportation business. It is proper that I emphasize that I exercise full control over every phase of the operation of my company.

EXHIBIT 1

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

No. MC 73464 [1]

JACK COLE CO., A CORPORATION, BIRMINGHAM, ALA.

At a session of the Interstate Commerce Commission, division 1, held at its office in Washington, D.C., on the 1st day of November A.D. 1955

After due investigation, it appearing that the above-named carrier has complied with all applicable provisions of the Interstate Commerce Act, and the requirements, rules, and regulations prescribed thereunder, and, therefore, is entitled to receive authority from this Commission to engage in transportation in interstate or foreign commerce as a motor carrier; and the Commission so finding;

It is ordered that the said carrier be, and it is hereby, granted this certificate of public convenience and necessity as evidence of the authority of the holder to engage in transportation in interstate or foreign commerce as a common carrier by motor vehicle; subject, however, to such terms, conditions, and limitations as are now, or may hereafter be, attached to the exercise of the privileges herein granted to the said carrier.

It is further ordered that the transportation service to be performed by the said carrier in interstate or foreign commerce shall be as specified below:

Regular routes: General commodities, except those of unusual value, class A and B explosives, household goods as defined by the Commission, commodities in bulk, commodities requiring special equipment, and those injurious or contaminating to other lading.

Between Birmingham, Ala., and Selma, Ala., serving the intermediate points of Centerville and Brent, Ala., and those between Centerville and Brent, restricted to traffic originating at or destined to points north of Centerville or south of Brent; all other intermediate points without restriction: From Birmingham over Alabama Highway 5 to junction U.S. Highway 80, and thence over U.S. Highway 80 to Selma, and return over the same route. From Birmingham over Alabama Highway 5 to junction Alabama Highway 43, and thence over Alabama Highway 43 to Selma, and return over the same route.

Between Browns, Ala., and Mobile, Ala., serving all intermediate points: From Browns over U.S. Highway 80 to junction Alabama Highway 5, thence over Alabama Highway 5 to junction U.S. Highway 43, and thence over U.S. Highway 43 to Mobile, and return over the same route.

Irregular routes: General commodities, except explosives, and commodities requiring special equipment.

Between Birmingham, Ala., and points within 15 miles of Birmingham, on the one hand, and, on the other, points in the Philadelphia, Pa., commercial zone, as defined by the Commission in 17 M.C.C. 533, those in the New York, N.Y., commercial zone, as defined by the Commission in 1 M.C.C. 665, Detroit, Mich., Edwardsville, Kewanee, and Litchfield, Ill., points in Indiana, Ohio, and Tennessee, those in that part of Illinois on, east, and south of a line beginning at

[1] This certificate embraces the operating rights in the certificates superseded and canceled in the last ordering paragraph above and is issued solely for the purpose of reflecting change in carrier's corporate name.

Cairo, Ill., and extending along U.S. Highway 51 to La Salle, Ill., thence along U.S. Highway 6 to Joliet, Ill., thence along Alternate U.S. Highway 66 to junction U.S. Highway 66, and thence along U.S. Highway 66 to Chicago, Ill., and those in Georgia on and west of a line beginning at the Georgia-Florida State line and extending along U.S. Highway 41 to Atlanta, Ga., and thence along U.S. Highway 29 to the Georgia-South Carolina State line, with no transportation for compensation on return except as otherwise authorized.

Cast iron articles: From Gadsden and Anniston, Ala., to points in the Philadelphia, Pa., commercial zone, supra, those in the New York, N.Y., commercial zone, supra, Detroit, Mich., Edwardsville, Kewanee, and Litchfield, Ill., points in Illinois on and east of a line beginning at Cairo, Ill., and extending along U.S. Highway 51 to La Salle, Ill., thence along U.S. Highway 6 to Joliet, Ill., thence along alternate U.S. Highway 66 to junction U.S. Highway 66, and thence along U.S. Highway 66 to Chicago, Ill., those in Georgia on and west of a line beginning at the Georgia-Florida State line and extending along U.S. Highway 41 to Altanta, Ga., and thence along U.S. Highway 29 to the Georgia-South Carolina State line, and those in Indiana, Ohio, and Tennessee, with no transportation for compensation on return except as otherwise authorized.

Marble: From Gantts Quarry, Ala., to the above-named points and those in the territories described above, with no transportation for compensation on return except as otherwise authorized.

Alcoholic beverages: From Cincinnati, Ohio, to Montgomery, Ala., with no transportation for compensation on return except as otherwise authorized.

Tires and tubes: From Gadsden, Ala., to Akron, Ohio, with no transportation for compensation on return except as otherwise authorized.

Cotton factory products: From Wetumpka, Sycamore, Pell City, Anniston, Boaz, Sylacauga, and Alexander City, Ala., to points in the Philadelphia, Pa. commercial zone, supra, with no transportation for compensation on return except as otherwise authorized.

Aluminum products: From Listerhill and Sheffield, Ala., to Flat Rock and Detroit, Mich., points in Ohio and Indiana, and those in Illinois on, east, and south of a line beginning at Cairo, Ill., and extending along U.S. Highway 51 to LaSalle, Ill., thence along U.S. Highway 6 to Joliet, Ill., thence along alternate U.S. Highway 66 to junction U.S. Highway 66, and thence along U.S. Highway 66 to Chicago, Ill.

Empty containers used in the operations described immediately above: From the above-described destination points to the above-specified origin points.

General commodities, except those of unusual value, class A and B explosives, household goods as defined by the Commission, commodities in bulk, and those requiring special equipment: Between Andalusia, Anniston, Attalla, Brewton, Demopolis, Dothan, Elba, Enterprise, Eufaula, Evergreen, Gadsden, Georgiana, Greenville, Montgomery, Opelika, Opp, Ozark, and Prattville, Ala., on the one hand, and, on the other, points in the Philadelphia, Pa., commercial zone, as defined by the Commission in 17 M.C.C. 533, those in the New York, N.Y., commercial zone, as defined by the Commission in 1 M.C.C. 665 and 2 M.C.C. 191, points in Ohio and Indiana, those in that part of Illinois on, east, and south of a line beginning at Cairo, Ill., and extending along U.S. Highway 51 to LaSalle, Ill., thence along U.S. Highway 6 to Joliet, Ill., thence along alternate U.S. Highway 66 to junction U.S. Highway 66, and thence along U.S. Highway 66 to Chicago, Ill., and Edwardsville, Kewaunee, and Litchfield, Ill., and Detroit, Mich.

The authority granted immediately above and that previously granted said carrier to the extent they duplicate, shall not be construed as conferring more than one operating right.

Tire fabric: From Decatur, Ala., to Akron, Ohio, with no transportation for compensation on return except as otherwise authorized.

Copper, brass, and aluminum tubing: From Decatur, Ala., to New York, N.Y., Cranston, R.I., and Boston, Mass., with no transportation for compensation on return except as otherwise authorized.

Chemical insecticides: From the site of the Huntsville Arsenal, near Huntsville, Ala., to New York, N.Y., with no transportation for compensation on return except as otherwise authorized.

Restriction: The service authorized immediately above is restricted to shipments having an immediately subsequent movement by water.

Aluminum and aluminum products: From Listerhill and Sheffield, Ala., to Monroe, Mich., with no transportation for compensation on return except as otherwise authorized.

It is further ordered, and is made a condition of this certificate that the holder thereof shall render reasonably continuous and adequate service to the public in pursuance of the authority herein granted, and that failure so to do shall constitute sufficient grounds for suspension, change, or revocation of this certificate.

And it is further ordered, That this certificate shall supersede Certificates Nos. MC 73464, MC 73464 Sub 22, MC 73464 Sub 53, MC 73464 Sub 60, MC 73464 Sub 66, MC 73464 Sub 73, issued August 7, 1950, August 29, 1947, November 21, 1949, July 13, 1950, October 1, 1951, and January 11, 1952, respectively, in the name of Jack Cole Co., Inc., as amended by order entered June 21, 1955, and that said certificates be and they are hereby canceled.

By the Commission, Division 1.

HAROLD D. MCCOY, *Secretary.*

[SEAL]

NO. MC 73464 SUB 80

At a session of the Interstate Commerce Commission, division 1, held at its Office in Washington, D.C., 19th day of March, A.D. 1958.

After due investigation, it appearing that the above-named carrier has complied with all applicable provisions of the Interstate Commerce Act, and the requirements, rules, and regulations prescribed thereunder, and, therefore, is entitled to receive authority from this Commission to engage in transportation in interstate or foreign commerce as a motor carrier; and the Commission so finding;

It is ordered, that the said carrier be, and it is hereby, granted this certificate of public convenience and necessity as evidence of the authority of the holder to engage in transportation in interstate or foreign commerce as a common carrier by motor vehicles; subject, however, to such terms, conditions, and limitations as are now, or may hereafter be, attached to the exercise of the privileges herein granted to the said carrier.

It is further ordered, and is made a condition of this certificate that the holder thereof shall render reasonably continuous and adequate service to the public in pursuance of the authority herein granted, and that failure so to do shall constitute sufficient grounds for suspension, change, or revocation of this certificate.

And it is further ordered, that the transportation service to be performed by the said carrier in interstate or foreign commerce shall be as specified below:

Irregular routes: General commodities, except those of unusual value, class A and B explosives, household goods as defined by the Commission, commodities in bulk, and those requiring special equipment; between the Anniston Ordnance Depot, near Anniston, Ala., on the one hand, and, on the other, points in the Philadelphia, Pa., commercial zone, as defined by the Commission, points in the New York, N.Y., commercial zone, as defined by the Commission, points in Ohio, Indiana, and that part of Illinois on, east and south of a line beginning at Cairo, Ill., and extending along U.S. Highway 51 to La Salle, Ill., thence along U.S. Highway 6 to Joliet, Ill., thence along alternate U.S. Highway 66 to junction U.S. Highway 66, and thence along U.S. Highway 66 to Chicago, Ill., and Edwardsville, Kewanee, and Litchfield, Ill., and Detroit, Mich.

By the Commission, Division 1.

[SEAL] HAROLD D. MCCOY, *Secretary.*

No. MC 73464 Sub 83 [1]

At a session of the Interstate Commerce Commission, Division 1, held at its office in Washington, D.C., on the 4th day of June A.D. 1957.

After due investigation, it appearing that the above-named carrier has complied with all applicable provisions of the Interstate Commerce Act, and the requirements, rules, and regulations prescribed thereunder, and, therefore, is entitled to receive authority from this Commission to engage in transportation in interstate or foreign commerce as a motor carrier; and the Commission so finding;

It is ordered that the said carrier be, and it is hereby, granted this certificate of public convenience and necessity as evidence of the authority of the holder to engage in transportation in interstate or foreign commerce as a common carrier by motor vehicle; subject, however, to such terms, conditions, and limitations as are now, or may hereafter be, attached to the exercise of the privileges herein granted to the said carrier.

[1] This certificate embraces the operating rights in the certificate superseded and canceled as noted in the last ordering paragraph above, as modified by orders entered March 12, 1956, and September 4, 1956, in said MC-F-5851.

It is further ordered that the transportation service to be performed by the said carrier in interstate or foreign commerce shall be as specified below:

Irregular routes: Textile products; from Langdale, Fairfax, Shawmut, and Lanett, Ala , to Opelika, Ala., with no transportation for compensation on return except as otherwise authorized.

It is further ordered, and is made a condition of this certificate, that the holder thereof shall render reasonably continuous and adequate service to the public in pursuance of the authority herein granted, and that failure so to do shall constitute sufficient grounds for suspension, change, or revocation of this certificate.

And it is further ordered that this certificate shall supersede certificates Nos. MC 18088 Sub 14, issued September 16, 1953, and December 23, 1953, respectively, with respect to those portions of the operating rights acquired by the above-named carrier pursuant to MC–F–5851, assigned No. MC 73464 Sub 83, and that said certificates be, and they are hereby, canceled to that extent.

By the Commission, Division 1.

[SEAL] HAROLD D. MCCOY, *Secretary.*

EXHIBIT 2

JACK COLE CO. GENERAL OFFICES, 1900 VANDERBILT ROAD, POST OFFICE BOX 274; BIRMINGHAM, ALA., PHONE ALPINE 1–8211

Company terminals:

Anniston, Ala., Post Office Box 1158, phone Adams 7–1711, Alvin Thomas, manager.

Atlanta, Ga., 1293 Loveless Street NW., phone Sycamore 4–3328, Clayton Geak, manager.

Birmingham, Ala., Post Office Box 274, phone Alpine 1–8211, J. T. Isbell, manager.

Chicago, Ill., 3261 South Hamilton Avenue, phone Lafayette 3–8668, Henry Maul, manager.

Cincinnati, Ohio, 1216 Knowlton Street, phone Mulberry 1–1358, Joe Lasita, manager.

East Gadsden, Ala., Post Office Box 2153, phone Liberty 3–5641–2, W. N. Dunson, manager.

Memphis, Tenn., Post Office Box 10215, McKellar station, phone Whitehall 8–4509–00, Virgil Pace, manager.

Mobile, Ala., Post Office Box 1203, phone Hemlock 2–8618–9, Quentice Blackwell, manager.

Montgomery, Ala., Post Office Box 1628, phone Amhurst 4–8426, Howard Kircus, manager.

Maspeth, N.Y., 56–07 48th Street, phone Stillwell 6–5450, Joe Kelly, manager.

Opelika, Ala., Post Office Box 830, phone Sherwood 5–5582, Joe Higgins, manager.

Philadelphia, Pa., 4125 East Thompson Street, phone Pioneer 3–1100, W. I. Olevsky, manager.

Selma, Ala., Post Office Box 166, phone TR–2–3413, Jake K. Ballard, manager.

Division 1 headquarters:

Columbus, Ohio, 1743 McKinley Avenue, Harold Sharkey, district supervisor, phone Broadway 6–3573.

Cartage companies:

Akron, Ohio, Roberts Cartage, Inc., Mr. Harold Shantz, 613 East Crosier Street, phone Hemlock 4–3234 and Hemlock 4–7813.

Columbus, Ohio, E. A. Schlairet Transfer Co., Mr. George Blubaugh, terminal manager, 1733 McKinley Avenue, phone Broadway 6–1182.

Dayton, Ohio, Atkinson Transfer Co., Mr. Roger Atkinson, 1481 Stanley Avenue, phone Baldwin 8–7822.

Detroit, Mich., 14th Avenue Cartage Co., Mr. William Dooley, 1038 21st Street, phone Tashmoo 5–9690.

Dothan, Ala., Mr. Paul Standifer, agent, 232½ East Main Street, Post Office Box 288, phone 2–9020.

Indianapolis, Ind., Trans-City Transfer Co., Mr. Jim Durnil, 301 South Alabama Street, phone Melrose 8–1448.

Opp, Ala., Dee Implement Co., Box 288, Perry Store Road, Mr. Vesta Rogers, Mr. Johnnie Dee, phone 2–8911.

Springfield, Ohio, Silver Motor Freight Terminal, Inc., 1203 West Main Street, phone FA 5–1251.

Toledo, Ohio, Rohr Cartage Co., Mr. Bill Rohr, 137 Hamilton Street, phone Cherry 2–0322.

STATEMENT OF C. J. WILLIAMS, PRESIDENT, HILLSIDE TRANSIT CO. INC., MILWAUKEE, WIS. AND CHAIRMAN, CONTRACT CARRIER CONFERENCE OF AMERICAN TRUCKING ASSOCIATIONS, INC., WASHINGTON, D.C.

My name is C. J. Williams and I am chairman of the Contract Carrier Conference of American Trucking Associations, Inc., Washington, D.C. This conference is a national nonprofit trade association, representing the contract motor carriers of the trucking industry. My company, the Hillside Transit Co. of Milwaukee, Wis., is a contract carrier engaged in the business of food distribution.

There are over 2,000 contract motor carriers in the country with interstate authority. In addition, of course, there are thousands more with intrastate authority. They represent all types of trucking, long haul over-the-road carriers, distribution carriers, specialized haulers and most types of equipment are included in their fleets.

This is a vast reservoir of truck and tractor-trailer equipment which could be called into service for the country if the need arose.

However, there is a situation prevailing with respect to the handling of Government freight which we feel should be brought to the attention of your committee, since it does have a direct bearing on the health of this segment of the trucking industry and its possible usefulness in time of mobilization.

We refer to the announced policy of the Department of Defense not to use contract motor carriers if a common carrier is available to handle the freight.

The efforts of this conference, on behalf of the motor contract carriers generally, to see that these carriers have a fair opportunity to share in the business of the country's largest shipper, the U.S. Government, go back many years and I will briefly review them.

Up until 1953, contract motor carriers who carried freight for the Government, and they were few and far between, did so under section 22 quotation, as did the motor common carrier. One such carrier was Baggett Transportation Co. of Birmingham, Ala., a contract carrier of explosives.

Under the act, and the Interstate Commerce Commission's regulations, contract carriers are required to file their rates with the Commission and they must be posted 30 days before they become effective. They must also file a bilateral contract. In a report by Division 2 of the Commission, dated September 1, 1953, in MC–C–1419, Baggett Transportation Co.—Petition for Exemption—Transportation for U.S. Government, decided May 30, 1953, contract carriers were ordered henceforth to comply with the aforementioned rules even when serving the Government, even though common carriers by law are exempt from filing rates covering services to the Government.

As a result of this ruling, the conference requested the ICC to investigate the possibility of exempting contract motor carriers from these requirements of the act, in order that they might equitably compete for Government traffic under section 22 quotations. The Commission did investigate the matter in *Ex parte MC 47, Transportation of U.S. Government Freight by Contract Carriers by Motor Vehicle.* This proceeding was assigned for hearing July 20, 1954, and all interested parties were heard. The position of the Contract Carrier Conference of ATA is contained in the brief filed in *Ex parte No. MC 47, Transportation of U.S. Government Freight by Contract Carriers by Motor Vehicle.* This proceeding was assigned for hearing July 20, 1954, and all interested parties were heard. The position of the Contract Carrier Conference of ATA is contained in the brief filed in *Ex parte No. MC 47, Transportation of U.S. Government Freight by Contract Carriers by Motor Vehicle,* dated January 3, 1955, and attached as exhibit A.

On August 15, 1957, the Commission issued an order stating that the relief sought by the Contract Carrier Conference from certain provisions of section 218(a) and 220(a) of the Interstate Commerce Act, and certain of the Commission's rules and regulations thereunder, with respect to schedules of minimum charges and contracts relating to transportation performed under agreement with the Federal Government was not warranted by the law or facts and was denied.

The Military Traffic Management Agency Memorandum No. 58–1, dated August 7, 1957, sets forth the policy and conditions under which the services of a motor contract carrier may be used by shipping installations or activities. This memorandum specifies:

1. Purpose: This memorandum sets forth policy with respect to the determination of the need for services of motor contract carriers within continental United States.

2. References: DOD Instruction No. 4515.1, September 17, 1954, provides that when a military department determines that a need exists for the services

of contract carriers, such carriers may be used subject to the administrative requirements provided therein. This instruction has been implemented in the current draft of Military Traffic Management Regulations to provide that shipping installations or activities desiring to use the services of a motor contract carrier will furnish the Executive Director, MTMA, all pertinent information concerning the traffic involved and the carrier with which such a contract is proposed.

3. Policy: It is the policy of the Executive Director that a need for the services of a motor contract carrier may be determined to exist and the negotiation of an appropriate contract may be undertaken under any one of the following conditions:

(*a*) When common carrier service is not available.

(*b*) When available common carrier service is not satisfactory.

(*c*) When the use of motor contract carrier services best serves the overall interests of the military departments.

4. Responsibilities: It is the responsibility of all elements of Headquarters, MTMA, to observe this policy in the handling of communications and negotiations pertaining to the use of motor contract carriers.

Apparently the overall philosophy behind this stated policy not to use contract motor carriers if common carrier services are available stems from Senate Report No. 2034, 83d Congress, 2d session, National Transportation Policy, or at least a justification for this policy refers to this report, attached hereto as exhibit B. Briefly, this report goes to the point that the common carrier is the defense backbone of the Nation and its maintenance on a high level is to be sought regardless of other factors which might be involved.

Because of the discriminatory treatment accorded contract carriers, the board of directors of the conference passed the following resolution at its February 1957 meeting:

"Whereas it has been called to the attention of the conference that the Department of Defense has adopted a policy of refusing to use the services of a contract carrier if common carrier service is available; and

"Whereas a large part of the Defense Department traffic, particularly the transportation of foodstuffs into military installations, must by law be awarded to the lowest bidder under an annual contract; and

"Whereas the services and facilities of contract carriers are well adapted to this type of transportation, and the public interest suffers when the Department of Defense refuses to use such services; be it

"*Resolved,* That the Contract Carrier Conference protest the arbitrary and unreasonable policy of the Department of Defense by serving this resolution upon it and the Armed Services and Appropriations Committees of the House and Senate."

This resolution was served upon all members of your committee at that time.

We insist that contract motor carriers are a standby defense facility too. Perhaps because of their specialization they might even serve more effectively in certain areas. They are taxpayers, the same as the common carriers are, and they deserve a fair deal in the awarding of our Government's freight. Only thus will Government be assured of their best facilities in time of emergency.

Thank you.

EXHIBIT A

BEFORE THE INTERSTATE COMMERCE COMMISSION

WASHINGTON, D.C.

Ex Parte No. MC–47

TRANSPORTATION OF U.S. GOVERNMENT FREIGHT BY CONTRACT CARRIERS BY MOTOR VEHICLE

BRIEF OF THE CONTRACT CARRIER CONFERENCE OF THE AMERICAN TRUCKING ASSOCIATIONS INC.

I. PRELIMINARY STATEMENT

This is the brief of the Contract Carrier Conference of the American Trucking Associations, Inc., hereinafter referred to as the conference. The conference on November 27, 1953, filed a petition with the Commission in *Baggett Transportation Company-Petition for Exemption-Transportation for U.S. Government* (docket No. MC–1419), in which the conference sought reconsideration of a compliance order issued by the Commission on May 20, 1953, and/or the institution of a

rulemaking proceeding. The relief sought was granted to the extent that a rulemaking proceeding was instituted and docketed as *Ex parte No. MC–47*. Subsequent to the institution of the instant proceeding, the rail carriers requested that the instant case and *Ex parte No. 192* be consolidated. The conference, on May 13, 1954, filed a petition with the Commission joining in the request of the rail carriers and requesting that the issues in *Ex parte MC–47* be broadened so that the Commission might grant to contract carriers relief from the provisions of section 220(a), part II of the Interstate Commerce Act. The two ex parte cases were consolidated and the issues in the instant case broadened as requested.

II. ISSUES

The issues which are here before the Commission for determination are as follows:

1. Should the Commission, under the discretionary power granted to it by Congress under section 218, part II of the Interstate Commerce Act, relieve contract carriers from the necessity of filing schedules of minimum rates actually maintained and charged when transporting property for the U.S. Government; and

2. Should the Commission grant relief to contract carriers from the regulations promulgated in *Contracts of Contract Carriers, Ex Parte No. MC–12* (1 M.C.C. 628 (1937)) and *Contract Carriers by Motor Vehicle Filing of Contracts, Ex Parte No. MC–9* (2 M.C.C. 55 (1937)) when transporting property for the U.S. Government?

III. POSITION OF CONFERENCE

The Contract Carrier Conference takes the position that the U.S. Government under certain circumstances requires the services of contract motor carriers; that the regulations under which the Government does business with motor carriers makes it impossible for the Government and the contract carriers to comply with the provisions of section 218 of the act and the regulations governing the contracts of contract carriers as promulgated by the Interstate Commerce Commission; that to grant relief to the contract carriers will not put them at a competitive advantage with other forms of transportation, but will only place them in an equally competitive position.

IV. ARGUMENT

In Baggett Transportation Company—Petition for Exemption—Transportation for U.S. Government (61 M.C.C. 771 (1953)) the Commission recognized that it has the authority to grant the relief here sought, stating:

"If in the future a proper showing should be made that there is a need for the modification of our regulations or for the granting of relief from the provisions of section 218(a) of the act, in connection with Government traffic, because of the risk to the national security or for other sufficiently valid reasons, we shall give due consideration to the institution of an appropriate rulemaking proceeding."

The facts of record in the instant case set forth "* * * sufficiently valid reasons, * * *" for granting the relief requested. The Government is today the largest shipper in the United States (see statement F, Witness Hill). Like any other large shipper it has a need for all types of transportation services including contract motor carriage. The testimony of Witness Wise offered by the conference demonstrates this fact very forcefully. Witness Wise, general manager of Miller Truck Line, a contract motor carrier, pointed out that his company dedicates between 12 and 15 pieces of equipment to the use of the U.S. Army (Tr. 18).[1] This equipment is used to transport various food products from a quartermaster warehouse in Dallas, Tex., to various Army camps and military installations located in Texas, Oklahoma, and Arkansas (Tr. 19 and 20). The shipments of foodstuffs are made up of both perishable and nonperishable items, and are peddled from the warehouse to the various military installations in much the same manner as a chainstore distributes from its warehouse to its retail outlets. To handle both perishable and nonperishable freight in one vehicle, refrigerated equipment with an insulated bulkhead is utilized, thus separating the perishable from the nonperishable traffic (Tr. 20). The testimony of Witness Wise demonstrates conclusively that his company is performing a specialized service for the Army, and one normally considered to be that of a contract carrier. There can be no doubt that the Army needs this type of service in order to feed its personnel.

[1] Tr. refers to pages of transcript.

This type of transportation service the Army puts out on bid. When the Miller Truck Line began to serve Dallas, they were requested to make a bid for the business and be ready to perform the service within 10 days (Tr. 23). In making the bid, they were required to submit one bid on an all-or-none basis (that is providing service to all of the camps which they were authorized to serve) and another bid on a separate installation basis (Tr. 25 and 26; see also exhibit No. 9).

After being awarded the work, a contract was entered into between Miller and the Army. (See exhibit No. 10.) The contract is not a bilateral one as required by the Interstate Commerce Commission, for it not only does not require the Army to turn over any given amount of traffic to Miller, but specifically states that it is "an open-end contract." In addition, paragraph 10 of the contract subjects Miller to renegotiation as provided in the Renegotiation Act of 1951 (Public Law 9, 82d Cong.).

It is impossible for a contract carrier to provide services for the U.S. Government, following its requirements and procedures, and at the same time comply with section 218 and 220 of the Interstate Commerce Act. Section 218 of the act requires that a schedule be on file for 30 days prior to the time that the rates are charged. This same section gives the Interstate Commerce Commission the power and authority to suspend the schedule within the 30-day period. As the record herein shows, after a contract has been awarded the carrier does not have 30 days within which to commence services. As a matter of fact, the record shows that Miller had not complied with the requirement when the Dallas operation began (Tr. 23 and 24).

Furthermore, when a carrier bids on an all-or-none basis and on a separate installation basis, he has no way of determining in advance the basis upon which he may be granted the business. For this reason, the schedule could not be filed in advance of the actual award of the contract.

A contract carrier bidding for Government business and being required to file a schedule of minimum rates which are subject to suspension, takes the chance of having the Commission suspend the schedule. It is then faced with either violating the Interstate Commerce Act and the suspension order, or breaching its Government contract.

As previously indicated the contract is not a bilateral one and for this reason does not meet the requirements of the Commission. The renegotiation clause, which the Army must put into the contract under the statute, makes it necessary for the contract carrier to agree to reduce the statute, makes it necessary for the contract carrier to agree to reduce the rates which he has on file with the Commission, thus violating the Interstate Commerce Act by charging a rate less than that set forth in the schedule. The testimony of Witness Wise and the exhibits offered, demonstrate conclusively that section 218 and the Commission's regulations concerning the contracts of contract carriers are in direct opposition to the Government's method of using contract motor carriers.

The record in the instant case amply warrants a finding that the U.S. Government, the largest shipper in the country, has a need for the services of contract motor carriers and uses those services, and further, that the Government's method of doing business with contract carriers makes it impossible for such carriers to comply with section 218 of the act and the Commission's regulations governing the contracts of contract carriers. For these reasons, it would appear that the Commission should grant the relief here sought in accordance with the dictum expressed in the *Baggett* case, supra.

The testimony of Witness Wise and that of the rail carriers and regular route common carriers shows conclusively that the contracting carriers are at a competitive disadvantage in handling Government traffic when they are required to comply with all provisions of the Interstate Commerce Act, whereas the common carriers under section 22 are relieved from the rate requirements of the act. The rails and the regular route common carriers do not deny this fact. Rather they admit it but attempt to justify a continuation of this inequitable competitive relationship by arguing that contract motor carriers, in the handling of commercial freight, have an advantage over common carriers in that they are not required to serve the public indiscriminately. While it is true that the contract carrier is not obliged to serve the general public, by the same token it is restricted against serving the public.

It would seem that if the burden of serving the public so outweighed the advantages of being able to do so, the railroads and the Regular Route Common Carrier Conference would not spend as much time, money, and effort as they do when a contract carrier seeks to convert to a common carrier and thus be obliged to assume the responsibility of serving the general public that the railroads and

regular route common carriers find so burdensome. Whatever may be the advantages or disadvantages of contract over common carriage in the handling of commercial freight, it is of no significance in this proceeding which only involves the distribution of Government freight. Perhaps the proper case in which to consider the broader subject would be *Ex parte No. MC–46*.

Common carriers, when performing services for the Government under section 22 quotations, are not in fact performing a common carrier service, for the services are being conducted under rates which are not open and available to the general public. These rates are more in the nature of a contract carrier rate. They are arrived at by renegotiation in the same manner as the rates of a contract carrier, the only difference being that the parties may renegotiate these rates without the benefit of regulation. Since the common carriers, when operating under section 22, are operating more as contract than as common carriers, why should they operate without the benefit of rate regulation and the contract carriers be required to adhere strictly to the law? The common carriers, of course, want this competitive advantage, but certainly the Commission as a nonbiased regulatory body can see the inequities involved and grant the relief here sought.

While the contract motor carriers are anxious to be placed on a competitive equality in the handling of Government freight, their most important concern is to be able to provide service for the Government when needed, under the procedures which the Government wishes to follow. The record in this case demonstrates clearly that this cannot be done.

Wherefore, the Contract Carrier Conference of the American Trucking Associations, Inc., respectfully prays that the Interstate Commerce Commission grant contract carriers relief from the provisions of section 218 of the act when transporting property for the U.S. Government, and relief from the Commission's regulations governing the contracts and the filing of contracts when transporting property for the U.S. Government.

Respectfully sumitted.

CONTRACT CARRIER CONFERENCE,
AMERICAN TRUCKING ASSOCIATIONS, INC.,
By CLARENCE D. TODD.

TODD, DILLON & CURTISS,
Of counsel
944 Washington Building,
Washington, D.C.
JANUARY 3, 1955.

CERTIFICATE OF SERVICE

I, Clarence D. Todd, do hereby certify that I have this 3d day of January 1955, sent a copy of the foregoing brief to all parties of record in the above-entitled case, by first-class mail.

CLARENCE D. TODD.

[S. Rept. No. 2034, 83d Cong., 2d sess.]

NATIONAL TRANSPORTATION POLICY

Testimony presented before the committee indicated that some confusion may exist as to the proper policies to be followed by executive agencies of the Government in their relations to carriers and public utilities. There was not sufficient evidence presented at our recent hearings to make a fair appraisal of the extent of such confusion, but it is deemed appropriate to outline here certain basic propositions in the interest of assuring for the future an administration of existing statutes consistent with the congressional intent.

The sound objective of our national transportation policy, as set forth in the declaration contained in the Transportation Act of 1940, is the development, the coordination, and the preservation of a national transportation system by water, highway and rail, as well as other means, adequate to meet the need of the United States, of the postal service, and of the national defense. To achieve this ultimate, it was recognized in the declaration that it was necessary to "foster sound economic conditions in transportation and among the several carriers, and to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices." While the declaration of policy by its terms is directed primarily at the establishment of principles for the guidance of the Interstate Commerce Commission in the administration of the

Interstate Commerce Act, and in the regulation of carriers subject to that act, other agencies and departments of the Government are expected to carry out their respective functions in relation to these carriers in such a way as to be consistent with the objectives of the transportation policy.

For instance, the Administrator of General Services is required by the Federal Property and Administrative Services Act to represent executive agencies before Federal and State regulatory bodies in proceedings involving transportation and other public utility services to the extent that he determines that so doing is advantageous in terms of economy, efficiency, or service. The fact that one of the guiding standards is "advantageous in terms of economy" would not require opposition to proposed general increases in rates of carriers or utilities simply because such increases would increase the cost of operations of certain Government departments. Opposition for such a reason would constitute a misconception of duty, a narrowness of outlook, and a misconstruction of the intent of Congress. Efficiency and proper service cannot long be maintained by carriers and utilities unless they are accorded a rate structure that will provide them with sound credit and yield them a fair return. If the increases sought would not yield more than enough for such purposes, then no Government agency or department should oppose such increases because ultimately the ability of the Government itself to render efficient service and to insure our national security is dependent upon the maintenance of sound and efficient systems of transportation and other utilities. The importance of these considerations far outweighs the importance of showing a greater economy in a department's expenditures for transportation. In short, a proper interpretation of the standards of the Federal Property and Administrative Services Act calls for a course of conduct in connection with appearances before regulatory bodies consistent with the requirements of the national transportation policy.

The same thing is true in connection with the exercise by the General Services Administrator or other executive department officials of the right to negotiate with carriers for transportation services at rates lower than those set by regulatory agencies for application to the general public. It has long been recognized that transportation charges may be unreasonable because of being too low, and any policy of bargaining for rates or playing one carrier off against another with the primary objective of getting the lowest possible transportation rate without regard to the consequences for the carrier is promotive of destructive competitive practices and fosters unsound economic conditions in transportation contrary to the national transportation policy.

Accordingly, all Government agencies and executive departments are admonished to pay full heed to the national transportation policy in their dealings with carriers.

Mr. LAWRENCE. We thought these gentlemen who are here, three in number, who represent active conferences in our organization, too, might present their statements. I would say first, Mr. Niness.

Mr. KILDAY. Will you identify yourself for the reporter by name and position?

Mr. NINESS. Sam F. Niness.

Mr. KILDAY. Did you have a statement?

Mr. NINESS. Yes, sir.

Mr. KILDAY. Go ahead with your statement.

STATEMENT OF SAM F. NINESS, PRESIDENT, CHEMICAL TANK LINES, INC.

Mr. NINESS. I am president of the Chemical Tank Lines, Inc., Leaman Transportation Corp., and Leaman Transportation Co., Inc. Two of these companies transport petroleum products on the eastern seaboard and the third transports chemicals, in liquid and dry form, in 38 States, District of Columbia, and Canada. In the first 6 months of 1959, these companies, combined, transported 132,755 loads or 624,435,647 gallons.

From the beginning of World War II it was my privilege to work for the late Joseph B. Eastman, Director of the Office of Defense

Transportation. I was Director of the Tank Truck Division. In that capacity I worked directly with the Military and Petroleum Administration for War in coordinating the movements of petroleum products by rail, pipeline, tank truck, and barge. One of the functions of our department was to replace tank cars with tank trucks on short hauls—hauls under 200 miles. This released 32,000 tank cars which were diverted to the movement of petroleum products from the Southwest and later on from the end of the Big Inch pipeline at Norris City, Ill., to the eastern seaboard. It was not uncommon for one tank truck to replace 10 to 15 tank cars on short hauls. We had an organization of tank truck carriers in every State headed by a chairman who made recommendations to our Washington office as to whether or not permits for tank cars could be denied and tank trucks put in their place on hauls under 200 miles. This organization did a great job and at the end of the war they formed themselves into an organization called the National Tank Truck Carriers, Inc.

Many of the men who worked during the war are today active members of this organization and operate in every State in the Union. In the case of another emergency the tank truck industry could be organized quickly to transport petroleum products or chemicals and accomplish the same job that was done during World War II. Tank trucks are the most flexible form of transportation for the movement of liquids and dry commodities in bulk. Further, these tank trucks are mobile in that they can be moved from city to city or State to State as the demand occurs.

Subsequent to World War II President Truman authorized the establishment of the National Petroleum Council, whose members are appointed by the Secretary of the Interior and whose duties, broadly, are to consult and advise the Secretary of the Interior on problems involving the refining, transportation, and distribution of petroleum products. As a member of that Council and a member of the Military Petroleum Advisory Board, I served as chairman of a subcommittee whose duty it was to take inventory from time to time of the available tank truck equipment throughout the continental United States. We have taken seven such inventories, the last of which was submitted to the Secretary of the Interior as of July 1, 1957—the first survey was made in September 1941 for Mr. Ickes, who was then Secretary of the Interior.

These surveys included not only the equipment operated by what we call the "for-hire" tank truck industry, common or contract carriers, but also the over-the-road equipment of oil companies and jobbers who operate it for their own use as private carriers.

The manufacturers of tank trailers throughout the United States must report monthly to the Department of Commerce the number of tank trailers produced by them. By projecting the figures as of July 1, 1957, and compensating for depreciation and obsolescence as had been done in previous surveys, we have arrived at an inventory as of July 1, 1959. This will give you some idea of the growth of our industry during the past few years. Please bear in mind that these equipment census, when submitted to the Department of the Interior for its use, are generally broken down in detail with respect to the Petroleum Administration Defense regions and have been separated on a State-by-State basis.

The total number of general-purpose tank truck and tank trailer equipment used in over-the-road transportation as of July 1, 1957,

was 37,068 units of which 15,763 units were owned and operated by the oil companies—private carriers—and 21,305 were operated by the for-hire industry—common and contract carriers.

As of July 1, 1959, this total has increased to 43,184 divided as follows: 18,134 for private carriers and 25,050 operated by the for-hire carriers. This is an increase of 16.5 percent. If the increase in capacity is also 16.5 percent the total fleet capacity in gallons would be 264,842,283 gallons as compared to 227,528,000 as of July 1, 1957. This is a sizable increase. I am inclined to believe it would be greater because the equipment produced during the past 2 years is larger than the units that were built previously.

I might also point out that during the past 2 years there has been a tremendous increase in the growth of the tank truck transportation of commodities other than petroleum. These commodities, the largest category being chemicals, are important to the national defense and to the military. A large number of chemical trailer units have been built to handle these commodities. They require special engineering, construction, linings, metals, unloading hoses, valves and fittings. For example, nitric acid requires a stainless steel tank; sulfuric acid requires a phenolic resin-lined tank; phosphoric acid requires either a rubber-lined or stainless steel tank. Also aluminum tank trailers have been designed to more efficiently transport alcohols, ammonium nitrate solutions, fatty acids and acetic acid. Specially constructed pressure tank trailers are used for the transportation of liquefied petroleum gas and anhydrous ammonia. As of July 1, 1957, there were 7,352 units of this type in both the for-hire and the private carrier industry. Since that time, although we have not developed these statistics, I am of the opinion that the number of pressure and chemical units has increased to more than 10,000.

These national tank truck fleets are well distributed throughout the continental United States in direct proportion to need, that is, the distribution of the tank truck equipment is still primarily in almost direct proportion to the consumption and production of petroleum and chemical products throughout the country.

As mentioned before, we found during World War II that in confining tank car operations to hauls of over 200 miles and converting the less than 200 mile hauls to tank truck, that one tank truck could do all the work of 10 or more tank cars. When you consider this and look at the figures of 43,000 or more general purpose tank trucks plus 10,000 pressure and chemical tank trucks and consider the fact that each one can do the work of 10 tank cars, we have a fleet of tank trucks equivalent to over 530,000 tank cars. When you also consider that as of the end of the year 1957, according to the ICC there were only 129,419 tank cars in operation, it shows that our tank truck fleet is a very sizable and important factor in any emergency that might occur.

The ability of the tank truck industry to remain in a position to meet a national emergency will depend upon whether or not regulations of the various defense departments and the emergency agencies will permit continued delivery of tractor power units, and also metals for the construction of tank trailer equipment; namely, steel, aluminum, nickel and copper, as well as rubber for tires. I mention these items because they were some of the biggest problems we encountered during World War II insofar as the tank truck industry was concerned.

I feel that the greatest problem we would face in activating our

industry would be the question of which governmental agency would have jurisdiction over us. It took 2 years to get this matter straightened out in World War II. We will not have 2 years in the next war.

In summation, the tank-truck industry is much larger, far better equipped, and better trained than it was at the close of World War II, and with proper governmental support we stand ready to perform our part in any national emergency.

Mr. KILDAY. Thank you, Mr. Niness.

I believe Mr. MacMillan is next.

STATEMENT OF E. F. MacMILLAN, NAVAJO FREIGHT LINES

Mr. MACMILLAN. Mr. Chairman and gentlemen of the committee, my name is E. F. MacMillan. I am executive representative to the U.S. Government for Navajo Freight Lines, a Denver-based motor common carrier.

I am also first vice president of the Munitions Carriers Conference, Inc., which is one of 12 national conferences affiliated with the American Trucking Associations, Inc.

Navajo Freight Lines has operating rights in 13 States and total revenues of over $20 million last year ranked it among the Nation's 20 largest motor common carriers of general commodities. A substantial portion of Navajo's business is in Government traffic and in this particular field, munitions play an important part—trafficwise. Munitions as the term is used here in the name of the Munitions Carriers Conference refer primarily to class A, B, and C ammunition and explosives shipped for the account of the Department of Defense.

Although explosives were first moved by truck as early as 1911, the transportation of military munitions by commercial motor carriers is a relatively new class of transportation—a class that provides a combination of safety and savings to the military departments. During World War II, the motortruck proved its ability in transporting munitions, and while the total tonnage moved was small in comparison to that moved by the railroads, the military departments were quick to recognize the achievements of the trucking industry, and wider utilization of trucks to transport munitions during the postwar period was encouraged. During the years 1951–53, with the Korean war as a stimulant, shipments of munitions by motortruck reached their peak. It was this large increase in truck tonnages and problems arising from the transportation thereof that served as the basis for the founding of the Munitions Carriers Conference.

The conference was organized in early 1952 and was accepted into the ATA official family of conferences in October of the same year. In essence, the conference was founded as a national organization representing common, contract, and private motor carriers to fill the need for specialized handling of the unique and complex problems arising from the transportation of muuitions over the highway.

One of the prime objectives of the conference is to work in harmony and cooperation with the Department of Defense in order that the Department may have its transportation needs fulfilled to complete satisfaction. A continued objective of the conference has been to insure that all of its members are completely aware of and consistently comply with all Department of Defense requirements (as well as those of other Government agencies) governing the movement of explosives by motor vehicle. Because of the nature of the commodity which

we transport, we are faced with a multitude of regulations with which we must comply. Most of these regulations are designed to promote the utmost in safety for the movement of a potentially hazardous commodity and in this connection we are pleased with the high caliber of our safety performance.

The conference has promoted the establishment of parking pools in an attempt to reduce the possibility of vehicles being left unattended, it has accepted the principle of interchanging equipment outside of congested areas; it has developed educational and safety brochures; it has assisted the Department of Defense in improving blocking and bracing methods for trailers; and it has assisted States and municicipalities throughout the country in the writing of ordinances and the development of safe routes through their cities. The conference is an active member of several organizations, one of which is the National Defense Transportation Association. This association has as one of its goals "to assist in effecting transportation preparedness for war as being one of the Nation's strongest guarantees of peace."

At present the conference is vitally interested in the movement of guided and/or ballistic missiles and the component parts thereof. We stand ready to assist the military in effecting the most expeditious movement of these commodities and in this connection the conference has recently participated in two guided missile transportation seminars. An article describing the "first" missile transportation seminar ever held is attached as appendix A.

(Appendix A referred to follows:)

APPENDIX A

MISSILE TRANSPORTATION, BY GENE T. WEST, MANAGING DIRECTOR, MUNITIONS CARRIERS CONFERENCE, INC.

(Reprinted from National Defense Transportation Journal, July–August 1958 issue)

The word "missile" is becoming more and more a common household word. It is a word which is certainly not new to the English vocabulary but could well be considered of recent origin as it pertains to a weapon of modern-day warfare. Today, of course, the word is seldom used without its most descriptive adjective—"guided." "Guided missile," then, is a phrase that has become so commonplace that the average layman in this country would have no difficulty whatsoever in mentally visualizing an image of what the words purport to describe in their present-day sense. Ask the same layman, however, to visualize the component parts or the inner workings of a "guided missile," and he will most likely become lost in a maze of scientific advances which for security reasons will not become public knowledge for years to come.

In this complex scientific field surrounding the research and development of guided missiles, the transportation specialist certainly can't be considered, from a knowledgeable point of view, in the same area as that which identifies the scientific minds that have developed these modern-day weapons of warfare. On the other hand, neither can he be considered in the same area as the layman mentioned earlier since the transportation specialist must, of necessity, have more than a cursory interest in any new product that is developed. We of the National Defense Transportation Association are quick to recognize the interrelation between the research, development, and production of a new weapon of war and the ultimate transportation of such items in the interest of national defense. Indeed, the very first objective of our association is "to assist in effecting transportation preparedness for war as being one of the Nation's strongest guarantees of peace."

Shipping containers for Navy's Bullpup, Rat, Sparrow, and Boar.

Seminar delegates gather alongside Navy's Regulus surface-to-surface missile.

In this respect, then, those of us who receive our livelihood from transportation must consider ourselves different from the aforementioned layman when we read or hear about the latest scientific developments in this country's defense program. The transportation specialist, for example, when reading about the Navy's new Polaris missile, not only conjures a mental picture of what the missile looks like and is supposed to do but he also attempts to visualize other features of the weapon. He wonders, for example, of what the missile is composed so that once it begins to move in transportation channels he can be assured that the proper

classification ratings will be applied. He wonders, too, how sensitive the item is so that he can be assured that it receives the proper packaging and subsequently the proper blocking and bracing in the vehicle used for transport. He wonders, also, as to its sensitivity from a hazard point of view, so that proper safety precautions may be taken when it moves in transportation channels. He wonders, further, about its length, width, circumference, weight, and density, so that the proper equipment will be available when needed. He wonders about the areas in which it and its component parts will be shipped, so that he can be certain routes are available which will meet military requirements. And he wonders about a multitude of other things, the answers to which will enable him to perform a satisfactory service in the transportation of the item in question.

To date, these answers have not been easy to come by, particularly in those areas where security is involved. Instead, the transportation specialists from both the carrier industry and the military have had to "feel" their way in a void emanating from rapid and secret scientific development. This last statement should not be construed as a criticism of those in charge of the development of our missile program but rather it should be used as a vivid illustration of the rapidity with which this program has developed. It is no secret that many of our missiles are obsolete before they ever reach the production stage, but this is a necessary evil of any crash program. Any planning for the transportation of these items then, even if there had been time, would have foundered in the wake of a fast-moving scientific dreadnought.

Even in the face of such rapid technological advances, however, responsible individuals in the transportation field could not help but feel that the Nation's "transportation preparedness" was suffering from a lack of knowledge of the items that would ultimately have to move. It was this realization that prompted action. The Military Traffic Management Agency, with traffic management responsibilities for all services, conceived the idea of a missile transportation seminar. Under the direction of Lt. Col. J. S. Tabb, Chief, Negotiations Branch, Freight Division, the idea was coordinated with the Navy's Bureau of Ordnance. From the Navy's side, Capt. C. K. Phillips, Director of Supply, NOTS, China Lake, became program chairman and he was assisted by Al Fernandes, transportation specialist of the Bureau of Ordnance, and Jesse Bell, Traffic Manager of the China Lake Supply Department.

Coffee break finds seminar delegates examining shipping containers.

Interested in the Sidewinder display are Cmdr. R. E. Johnson, BUORD; Mr. A. Fernandes, transportation specialist, BUORD; Capt. C. K. Phillips, SC, USN, Director of Supply, NOTS; Gene T. West, managing director, Munitions Carriers Conference; and Jesse Bell, Traffic Manager, NOTS.

The culmination of the efforts of these men came on May 19–21 when the first Missile Transportation Seminar was held at the Naval Ordnance Test Station in China Lake, Calif. At this seminar leaders in traffic management and safety met with top scientists and engineers of the Navy to analyze the present and future problems stemming from the classification, handling, and shipping of Navy weapons—particularly those weapons now being developed in the rocket and missile field. Approximately 70 transportation experts, representing various carrier industries and governmental agencies, came from all over the country to participate in the comprehensive 3-day seminar.

As the first of its kind, the seminar dealt primarily with the technique and methods of handling, packaging, and transporting guided missiles. Additionally, the seminar established a precedent since, for the first time, serious thought and comprehensive discussion took place on a subject that is becoming increasingly important in any discussion of transportation and national defense.

The purpose of the seminar was to provide satisfactory answers to transportation specialists as to what guided missiles consist of, how they operate, whether they all have electronic components, whether they are inert or partly explosive, and how sensitive they are to shock, vibration, heat, and to shipping vicissitudes. Additionally, discussion was developed to determine whether or not such missiles are presently being transported on suitable equipment and whether present freight classifications are really descriptive of the items being transported.

Designated representatives of the station's technical departments assisted in answering many of the questions which arose during the 3 days of conferences. Questions and answers were developed by lectures, slide presentations, motion pictures, and test firings. Guided missiles now in fleet use as well as those in process of research, development, and test, both at China Lake and by the Underwater Ordnance Department at Pasadena and San Clemente, were included in the discussion. The Bureau of Aeronautics' Naval Air Missile Test Center at Point Mugu furnished technicians who made valuable contributions to the

program from the standpoint of missiles under test at Mugu. Actual test firings of the Navy's newest types of guided missiles on the station's ranges were observed by the visiting delegates.

The members of this association can look with pride to the success of this seminar as evidence that the "transportation preparedness for war" of our Nation has progressed one step further. We can look with pride, also, at the excellent coordination between the various military services that made the seminar possible. There can be no doubt that this first "missile transportation seminar" qualifies as an achievement which follows the dictum of the first listed objective of this association. Additionally, and in this writer's opinion, the successful culmination of the seminar meant even more for it served to bring home once again the forceful words of the Father of our Country, George Washington, who said: "To be prepared for war is the most effective means of preservation."

Mr. MACMILLAN. We have always been proud of our ability to aid in the movement of vital materials and during the Middle East crisis last year Conference Managing Director, Gene T. West, wrote the Executive Director of the Military Traffic Management Agency offering the full moral and physical support of the conference and its members and assured him that the carriers were ready to be of assistance when and as needed. It is obvious, then, that the members of the Munitions Carriers Conference are vitally interested in transportation preparedness and will do everything possible to help effectuate a sound program in this important area.

In the munitions field it would be difficult to determine the actual transportation lift available. At present, for example, there are less than 300 carriers on the "approved list" of the Military Traffic Management Agency for the transportation of this commodity. Of these carriers, 59 maintain membership in the Munitions Carriers Conference and it is estimated that this small nucleus of carriers transport over 80 percent of the munitions moved by truck for the Department of Defense. Best available figures show that since the Korean war the trucking industry, each year, has transported from 30 to 45 percent of the available Department of Defense munitions tonnage. Since 1955 this figure has not risen above 35 percent. The total amount of tonnage moving each year, however, has declined drastically and today there is concern among members of the conference as to how they can maintain their facilities on a declining amount of tonnage.

For example, a survey of conference members in 1956 revealed that these carriers had invested approximately $30 million in their munitions operations and it was costing them over $20 million each year to maintain their facilities. Such things as above-standard equipment, parking and interchange lots, added safety features, added insurance, and special training programs are considered essential to the transportation of a hazardous commodity.

Yet, these very things serve to skyrocket the cost of handling such a commodity.

Up until October of 1955 these costs were well compensated by the rate level then applicable to the movement of munitions. At that time, however, the going rate on munitions was slashed approximately 38 percent across the board. The slash occurred as the result of competition between two modes of transportation coupled with section 22 of the Interstate Commerce Act which allows a carrier to submit free or reduced rates to the Government. (This section does not say the Government must accept the tendered rate.) Add to this a policy which requires Government agencies to utilize the lowest available rate, other factors being equal, and you have the elements of destruc-

tive competition centered around the movement of a commodity essential to national defense. Since October of 1955, then, the trucking industry's transportation preparedness in the field of munitions transportation has deteriorated. We are not happy with this deterioration but we feel strongly that we should not be required to bear the expense of maintaining a transportation facility for eventual use by the Government, while at the same time the Government's own policy of utilizing the lowest rate fosters and encourages destructive competition among competing carriers. Destructive competition can only result in financial detriment to all carriers involved.

In the interest of maximum preparedness for any national emergency which might arise, it is believed appropriate to suggest a new look at the policy and procedure followed by the military—and also by civil agencies of Government engaged in stockpiling of strategic materials—in the distribution of freight traffic during peacetime (or shall we say, during the cold war era?). There are sound reasons for this suggestion.

Generally speaking, if an agency has a large volume of freight to move from point A to point B the tonnage will be routed via the lowest-rated route if all rates are not on a parity or it will be distributed among the several available carriers if the cost of transportation is substantially the same via all of them. This may be said to be an admirable policy from the standpoints of conservation of transportation funds and equitable distribution of Government traffic under normal or so-called peacetime conditions. Nevertheless, from a national preparedness standpoint it is not necessarily the wisest policy in our humble opinion.

We believe that too much emphasis is placed upon the theory of equitable distribution of Government traffic. We believe that in the movement of military property more emphasis should be placed upon the ability and facilities of a carrier to serve a given installation or perform a given service. All too often in its efforts to equitably distribute tonnage a Government agency will wind up with some routes which are much inferior to others, even in peacetime, or the traffic will be spread so thin among a number of different routes that numerous service deficiencies develop.

On the other hand, if Government transportation officers had more latitude in distribution of tonnage (such as industrial traffic managers have) they could be more selective in their choice of routes, obtain consistently better service, and maintain closer supervision over the carriers' performance. Some carriers are geared up better than others to serve a given Government installation or perform a given service. Some have adapted their equipment and facilities to the needs of the military more than have others; some have specialized in meeting military transportation requirements while others have only exhibited a passing interest in Government traffic due to the nature of their operations. These factors, to our way of thinking, should all be accorded due consideration in the distribution of Government traffic. All motor carriers will, of course, pitch in to do their part in the event of a national emergency but those best equipped to do the most efficient job of munitions transport now should be encouraged to keep their facilities and know-how at top level as they will be the initial mainstay in meeting emergency transportation requirements.

One more point in connection with traffic distribution may be worthy of mention. That has to do with balanced movements. Frequently

a motor carrier will be tendered a large movement of military property from point A to point B which requires allocation of a large number of pieces of equipment by the carrier to handle the movement. Often this equipment must all, or in large part, be deadheaded back from the point of delivery to point of origin or for some considerable distance to the closest large terminal because of lack of return tonnage. While it is realized that the pattern of Government traffic is such that many one-way movements are inevitable, empty mileage is expensive to all concerned and we advocate a Government policy of coordinating traffic movements to the fullest extent possible toward the end of minimizing empty mileage which, in the final analysis, is a waste of transportation facilities.

If all possible efforts are exerted by Government agencies to make the most efficient and practical use of motor carrier facilities it will encourage the carriers to make all-out efforts to provide everything that is required as to manpower and physical equipment to meet any emergency. No carrier can afford to invest in standby equipment and maintain top-notch facilities geared to anticipated emergency requirements without any reasonable assurance that they will be used to the best advantage possible under peacetime conditions. They should be utilized at least to an extent that will justify their maintenance.

Gentlemen, it is generally accepted among our military leaders today that in the event of a nuclear war, speed, flexibility, and mobility will play a major role in determining the victor. The motor-truck, in our opinion, best meets these qualifications for success as far as land transportation is concerned. Maj. Gen. Paul F. Yount, former chief of transportation for the Department of the Army, now retired, once said:

> The maintenance of an experienced and qualified motor carrier industry trained in the movement problems involved in the shipment of explosives is deemed essential to meet the needs of national defense.

We believe it would be difficult for anyone to take serious issue with this statement. Yet, in spite of this dire need we find an experienced and qualified industry suffering because of what we feel to be an unsound Government policy which requires a Government agency to utilize the lowest transportation rate available in the movement of any commodity—defense or otherwise. This statement is even more disturbing when we realize that under section 22 of the Interstate Commerce Act a carrier could submit a free rate, if he so decided, to drive his competitors completely out of business.

The Munitions Carriers Conference, Inc., is an "organization dedicated to the safe and efficient transportation of munitions in the national interest. Our livelihood is concerned with the movement of this commodity which is so strongly associated with national defense. Since our inception the members of this conference have endeavored to perform a superior transportation service for the Department of Defense. We have also endeavored to hold ourselves in readiness for a transportation emergency should it come. We do feel, however, that transportation preparedness is a joint responsibility of the Government and industry. We would request then, gentlemen, that in your deliberations you give serious consideration as to how this "experienced and qualified motor carrier industry, deemed essential to meet the needs of national defense," shall be maintained.

Thank you, gentlemen, for allowing us to present our views here today, and we take this opportunity to assure you that we stand ready, as in the past, to render our experienced and qualified services in the interest of national defense.

Thank you, Mr. MacMillan. I believe Mr. Norris P. Sterling is next.

STATEMENT OF NORRIS P. STERLING, GENERAL TRAFFIC MANAGER, DAVIDSON TRANSFER & STORAGE CO.

Mr. STERLING. Mr. Chairman and gentlemen of the committee, my name is Norris P. Sterling, and I am general traffic manager of the Davidson Transfer & Storage Co. I have been associated with the company for 24 years. Our general office and principal terminal is located at 6201 Pulaski Highway, Baltimore, Md.

The company had its origin in 1896, when Isaac W. Davidson came to Baltimore, Md., and began a local drayage business with a single horse and wagon, handling freight for Baltimore merchants from and to the steamboat piers and railroad freight stations. The company has been in continuous operation since this early beginning and is still owned and operated by the eight sons of the founder.

The first motortruck was purchased in 1914, but scheduled over-the-road service did not start until 1919 when the company began operating regular schedules between Baltimore, Md., Washington, D.C., Philadelphia, Pa., and New York, N.Y., one trip weekly to each city.

The company was incorporated in 1930 and was subjected to Federal regulation when Congress passed the Motor Carrier Act of 1935. Presently the Davidson Transfer & Storage Co. is a class I interstate common carrier of general freight, operating over regular routes under authority granted by the Interstate Commerce Commission in certificate of public convenience and necessity No. MC–69281. These operations are principally within the Middle Atlantic States, and the area served encompasses New York, N.Y., and an area of 35 miles thereof, on the north to Norfolk and Richmond, Va., on the south, including all principal intermediate points.

Davidson also participates in through rates with many connecting carriers and affords through service without transfer of lading en route by interchange of trailers with these connecting carriers. We have for many years handled shipments between points on our line and points in New England, the South, and the Middle West.

Recently we arranged for participation in transcontinental rates and will soon begin this service with several connecting motor carriers. We have freight terminals located in the following cities: New York, N.Y.; Jersey City, N.J.; Trenton, N.J.; Philadelphia, Pa.; Wilmington, Del.; Baltimore, Md.; Harrisburg, Pa.; York, Pa.; Lancaster, Pa.; Washington, D.C.; Richmond, Va.; Fredericksburg, Va.; Norfolk, Va.; Suffolk, Va.

We presently operate approximately 700 pieces of rolling equipment. All of our major terminals are connected by private leased telephone lines which assures fast communications and closer control and dispatch of our equipment. We have our own safety patrol cars equipped with radiotelephones. These safety patrol cars patrol the highways over which we operate in constant supervision of our road units. Thus we can locate any of our road units en route between terminals in a short time. This close supervision lessens delays caused by

breakdowns since replacement equipment can be quickly dispatched, or equipment can be exchanged en route in order to keep loads moving that need expedited service.

Our total investment in revenue equipment is approximately $4 million. We are also in a position to add new equipment when the need arises. As a matter of fact, there is always some new equipment on order. We give regular employment to approximately 950 employees. In addition to our general freight operations, just described, we also operate as a common carrier of household goods over irregular routes in all States east of the Mississippi River and the District of Columbia. In the full year 1958 we transported 400,624 tons and our gross revenue was $7,780,891.

During 1958 our equipment operated approximately 6,353,851 miles. For the first 6 months of 1959 we transported 217,041 tons for gross revenue of $4,175,215 and our trucks piled up 3,350,134 miles. Approximately 90 percent of our gross revenue is derived from our general freight operations. The balance of 10 percent is derived from our household goods operations.

Copy of our station list No. 8, together with copy of our certificate, is attached hereto and identified as exhibit A. List of equipment owned and operated, shown on page 4 of the station list, does not agree with the figures given earlier in this statement. The difference represents equipment placed in service since the station list was published.

There are located within the territory served by Davidson's general freight operations several hundred Government posts, reservations and establishments. We estimate that we handle from and to these facilities approximately 60,000 tons yearly.

During the time of my employment with the company, we have operated through two wars—World War II and the Korean War. Traffic handled for the armed services during these emergencies was considerably greater than during normal times.

Since we served the ports of embarkation in New York and northern New Jersey; Philadelphia, Pa., Baltimore, Md. and the Norfolk, Newport News and Hampton, Va., port area, most of this traffic had to be handled on a rigid schedule and it would have been difficult if not almost impossible for the Armed Forces to have met these schedules by any other mode of transportation.

We found it most difficult to get manpower, parts, tires and replacement equipment during World War II; however, despite these handicaps were able to meet the service demands made upon us by the Government, and are sincere in our belief that we made a real contribution to the war effort. Our company is typical of the many thousands of small motor carriers whose operations blanket the 48 States of the continental United States, serving thousands of communities not served by any other transportation mode.

These motor carriers have in the past made a real contribution in our Nation's all-out war efforts, and can again be of real value in times of national emergency; however, in order to function properly Congress should provide for an orderly supply line of necessary manpower, tires, parts and equipment. Otherwise, this very useful service will not be available when it is most needed.

Those familiar with the history and development of motor common carriers will subscribe to their ability to perform the unusual when called upon to do so.

Should we ever have to fight another major war—may God grant that this will never come to pass—if the for-hire motor transport industry is called upon, we can and will make a real contribution.

Mr. KILDAY. Thank you, Mr. Sterling.

Thank you, gentlemen, your statements will be most helpful and will be studied by us in the preparation of our report.

Thank you, gentlemen.

STATEMENT OF BRAXTON B. CARR, PRESIDENT, AMERICAN WATERWAYS OPERATORS, INC.

Mr. KILDAY. Our next witness is Mr. Braxton B. Carr, president of the American Waterways Operators, Inc. Mr. Carr.

Mr. CARR. Mr. Chairman and members of the committee, my name is Braxton B. Carr. I am president of the American Waterways Operators, Inc., the nationwide shallow-draft water carrier association which represents the operators of barge, towboats, tugs, and shallow-draft self-propelled vessels as well as the builders and repairers of this equipment. Our principal offices are located at 1025 Connecticut Avenue, Washington, D.C. We have regional offices in New York City and New Orleans, La.

The subcommittee chairman's opening statement in this hearing called attention to the fact that "all parts of the (Nation's transportation) system contribute to the whole." The shallow-draft water carrier industry concurs with this concept and the service record of our industry shows a substantial contribution.

We further support the concept that the Nation's defense-mobilization effort with respect to transportation must be constructed on a foundation equally supported in quality of service by five pillars representing air, motor vehicle, pipeline, rail, and water carrier services—both deep-draft and shallow-draft water carrier services.

Anything that dissipates the service strength or hampers the growth potential of any one of the individual modes of transportation weakens that particular carrier's defense capabilities and the support which it can be called upon to give in time of emergency. This in turn weakens the entire transport structure of the Nation. Consersely, anything that strengthens the service capabilities of one mode of transportation, without such strength coming at the expense of another mode of transportation, is desirable in the national interest.

For this reason the American Waterways Operators, Inc., believes that all of the privately owned and independently operated modes of transportation should be and are capable of being fused into a smoothly functioning, coordinated total transport system with the individual segments as well as the individual modes retaining their separate identies. This is necessary so that no mode will be dominated by another mode and so that the inherent advantages of each individual mode will be available to the Nation to provide for an adequate defense transportation system in the event of mobilization.

Such a polity, we believe is consistent with the national transportation policy as enunciated by the Congress and to which our association wholeheartedly subscribes.

The memorandum from the subcommittee suggests that our presentation concern itself with—

(1) The present status of the inland water carrier industry;

(2) Its potential future development;

(3) Its ability to perform in the event of mobilization; and
(4) Government regulatory policy and controls.

PRESENT STATUS OF INLAND WATERWAY TRANSPORTATION

The Nation has available for use approximately 29,000 miles of navigable inland channels, exclusive of the Great Lakes system. A little over half of these channels, approximately 15,000 miles of waterways, have been developed to provide 9-foot standard operating depth or more. The rest of our inland waterways system is substandard, less than 9 feet deep, but even these substandard channels contribute to our Nation's economy and defense position because over these channels much inland water traffic can and does move regularly due to public demand for low-cost shallow-draft water carrier services.

The principal inland waterway systems include the New York State Barge Canal which traverses the State and connects New York Harbor with the Great Lakes system and the St. Lawrence Seaway; the protected inland Atlantic Intracoastal Waterway which reaches from Trenton, N.J., to Key West, Fla., and which is fed by a series of tributary rivers and canals on the eastern seaboard; the Mississippi River system which starts with the Allegheny, Monongahela, Ohio and Kanawha Rivers on the east, which connects with the Great Lakes and Seaway systems through the Illinois Waterway at Chicago, which reaches west to Minneapolis and St. Paul on the upper Mississippi, to Sioux City on the Missouri, and which includes other principal tributary systems of the Tennessee, Cumberland, Arkansas and many smaller rivers; the protected inland route of the Gulf Intracoastal Waterway which reaches from Carrabelle, Fla., to Brownsville, Tex.; a great system of feeder waterways connecting with the Gulf Intracoastal Waterway, including the Warrior-Tombigbee system in Alabama and the Mississippi River system itself; the Sacramento River and its tributaries in California; and the Columbia-Snake system in Washington, Oregon and Idaho.

Attached as supplement No. 1 to this statement is a map locating all of the Nation's inland waterway channels to which I refer.

Approximately 1,700 individual companies, most of them small business concerns, operate some 19,000 pieces of equipment over these inland waterways systems. These companies employ an estimated 80,000 persons aboard the fleet, while approximately an equal number of persons are engaged in shoreside employment to keep the fleet operative.

In a review of the status of the inland water carrier industry at the conclusion of World War II, the Office of Defense Transportation said:

> The improved facilities and floating equipment plus the ingenuity and inventiveness of the (inland water carrier) industry enabled it to move large volumes of cargo which could not have been moved by any other medium of transportation during the war.

The most outstanding characteristics of the shallow-draft water carrier is perhaps this ingenuity and inventiveness to which the Office of Defense Transportation referred. Depending on this ingenuity and inventiveness to resolve transportation problems as they arise, the inland vessel operator has been able to grow in service to the Nation despite his being bound to fixed routes where speed has its limitations—this in an age when every other carrier's emphasis was on spreading his service routes and adding to his speed.

The great service record of the shallow-draft water carrier industry has been achieved by the operators' concentration in carrying heavy bulk commodities in vessels designed especially for these commodities. Packaged goods have practically disappeared from inland waterways commerce. With the disappearance of this trade the operators have concentrated their interests in the development of vessels to carry bulk commodities such as coal, ores, grain, iron, and steel products, petroleum and petroleum products, chemicals and building materials at costs no other mode of transportation can match for economy.

With the standardization of channel depths insofar as possible and the standardization of lock chambers, there has been an increasing tendency to standardize barge sizes. The two most popular sizes insofar as overall dimensions are concerned is a barge 175 feet long and 26 feet wide and a larger one 195 feet long by 35 feet wide.

The 175- by 26-foot barge has an average capacity of 1,000, tons. The 195- by 35-foot barge can carry half again as much for a load of approximately 1,500 tons. There are both larger and smaller barges in use. The smallest type in common use will carry about 600 tons. Barges which will handle 2,000 to 3,000 tons are not uncommon. There is one giant barge in regular use that will handle in excess of 7,000 tons.

Although their hull sizes are generally fairly standard, items which barges can haul are virtually unlimited. Liquefied methane can be transported by specially constructed barges at temperatures as low as minus 258° F. Molten sulfur at plus 350° F. can be transported in thermos-type barges. In addition to the barge with the thermos-tanks used to transport molten sulfur, the double skin tank barge with inner compartments separate from the hull plating and insulated for various cargoes that must move at varying degrees of temperature, the most common type tank barge is the single skin vessel in which cargo is loaded directly into and against the hull plating. This is the type barge most commonly used for transporting petroleum and petroleum products, the single biggest commodity load common to virtually all of the 29,000 miles of navigable inland channels in this country today.

During World War II vast amounts of petroleum and petroleum products were moved by barge to sustain our Nation's war effort. Our military production planners relied heavily upon barges for many complete movements, but perhaps the outstanding role of the barges was that which they performed in combination with other modes of transportation. Illustrative of this vital role was the transportation of petroleum by barge from the Texas oilfields over the protected Gulf Intracoastal Waterway to Carrabelle, Fla. From there, the petroleum was transferred to a pipeline and pumped across the State to Jacksonville where it was again loaded in barges for movement up the Atlantic seaboard over the Atlantic Intracoastal Waterway. More than 27,000 barrels of petroleum were moved daily in this barge-pipeline-barge movement which the Nazi submarines could not touch.

Barges were credited with transporting 1,731 million barrels of petroleum and petroleum products during the war years.

The Office of Defense Transportation citation referred to earlier concludes:

> If our waterways rendered no service beyond that of transporting petroleum and its products during the war, they would have amply justified their improved existence.

The latest available figures show that 2,309 tank barges with a total cargo capacity of more than 3 million net tons are available for carrying liquid commodities.

Dry cargo is transported on the inland waterway system in 12,912 dry cargo barges and scows that have a combined total capacity of over 10 million net tons.

The most common of the dry cargo vessels are the open hopper barges which are used to transport such commodities as coal, ores, iron and steel products, and a variety of other items which do not need protection from the weather. The capacity of these barges ranges from 600 to 3,500 tons with the average open hopper barges having a carrying capacity equivalent to that of 70 railroad freight cars.

Covered hopper barges, with sliding steel weathertight hatch covers, are used to transport cargoes which must be protected against the weather. Such cargoes include grains and agricultural products, salt, paper products, certain minerals, and even in some cases packaged goods.

Deck barges, with capacities up to 2,000 tons and over are used to carry machinery, trucks, military vehicles, and other heavy equipment.

At about the midpoint of World War II, in 1943, there was 9,607 dry cargo barges and scows in service, with a total capacity of 6 million net tons; and 1,744 tank barges with a total capacity in excess of 2 million net tons; or a combined carrying fleet of 11,351 vessels with a total capacity of 8 million net tons.

Today the inland waterway fleet has 15,221 cargo vessels with a combined carrying capacity of 13,771,757 net tons available to serve the Nation.

The standard for power to move the barge cargo-carrying units is the towboat, whose name suggests a misunderstanding of its method of imployment. The towboat in use on the inland channels of this country pushes its load rather than pulls it, and thereby hangs one of the little known stories of the increase in efficiency which characterizes this transportation industry.

Pull-towing operations or on-the-hip operations, such as are most commonly seen by the average individual in harbor operations, permit a power unit to carry only a limited number of barges.

In the push-towing operations which have been developed on the rivers and canals, a towboat can handle from 10 to 40 barges tied rigidly together into a single unit with the boat pushing from the rear. The number of barges in a single tow will depend upon channel conditions and the available power in the towing unit.

A 4,000-horsepower towboat, for instance, can under certain operating conditions handle 20 loaded barges with ease. While the majority of boats in use are under 4,000 horsepower, more and more are being built which approach this horsepower and there are many in use in line-haul operations on the Mississippi River system itself which exceed 4,000 horsepower. Pull-towing operations are still carried on in the Gulf Intracoastal Waterway and in open water operations coastwise along the Atlantic and Pacific seaboards and in the gulf.

The most recent figures show that there are 4,169 diesel towboats and tugboats in operation on the inland channels, with a total of combined horsepower of 2,308,251. These towboats range in size from the small harbor craft of 300 to 400 horsepower, to the 8,500

horsepower towboat which was recently constructed especially for towing on the lower Mississippi. The most common towboat sizes range between 1,200 horsepower and 4,000 horsepower.

Modern towboats are characterized by highly efficient dependable powerplants, electronic steering controls, radar depth finders, swing indicators, powerful searchlights and radio and radiotelephone communications which make possible round-the-clock operations in all kinds of weather and channel conditions.

THE POTENTIAL FUTURE DEVELOPMENT OF INLAND WATERWAY TRANSPORTATION

Previous witnesses in these hearings have estimated that the inland waterway fleet has the capability of expansion in a mobilization effort. I have no reason to discount this statement; in fact, our experience buttresses this position. Experience has shown that towboats do not always operate at full load capacity. Additional barges could be added to many tows. Depending on availability of more water in the channels, many times barges could operate with heavier loads. Back hauls could be added in many cases.

During 1957, the last year for which complete statistics are available, inland water carriers rendered 8.6 percent of the total domestic ton-miles of freight service. They are credited with 115 billion ton-miles of service, hauling 391,889,975 net tons of cargo.

We think it is safe to say that in the event of mobilization with maximum intensive use made of active plant coupled with the restoration of unused or even obsolete inland water equipment, an increase in carrying capacity of approximately 20 to 25 percent could be had. This increase would produce on the basis of the 1957 figures, a maximum inland waterway hauling capacity approaching 500 million net tons.

Attached to this statement as supplement No. 2 is a comparison of the ton-miles of freight service rendered in the United States by the various modes of transportation, and the percentages of the total that each mode transported for selected years. This supplement contains the 1957 figures to which I referred. Reference to supplement No. 2 readily shows the relative role of each mode of transportation in the Nation's overall transportation picture.

In 1947 inland water carriers transported 262 million net tons of commerce and rendered almost 35 billion ton-miles of service. In 1957, as the chart shows, inland water carriers transported 391 million net tons of commerce and provided almost 115 billion ton-miles of service.

We have estimated that inland water carriers can reasonably be expected to handle 425 million net tons of cargo for a service record of 138 billion ton-miles by 1960, and 488 million net tons for a service record of 178 billion ton-miles by 1965. If the industry is to achieve this service record, it must be protected from predatory competitive tactics designed to destroy its service; it must have adequately maintained channels over which to operate without unnecessary physical restrictions, such as unrealistic low-level bridges; and it must be given an opportunity to develop its service potential under a national transportation policy which equally protects the rights of each of the various modes of transportation to render the most efficient and economical service to the shipper.

By 1960 the inland waterway fleet can reasonably be expected to contain 4,334 towing vessels with a combined total of 2,672,089 horsepower, 13,905 dry cargo barges and scows with a total cargo capacity of 11,867,598 net tons, and approximately 2,516 tank barges with a total cargo capacity approaching 4 million net tons.

By 1962 the inland waterway fleet is expected to be made up of 4,447 towing vessels with a total of 2,945,978 horsepower, 14,609 dry cargo barges and scows with a total cargo capacity in excess of 12,959,714 net tons, and 2,664 tank barges with a total cargo capacity of 4,162,340 net tons. This would give the Nation a combined cargo carrying capacity in dry cargo and tank barges of 17,122,054 net tons.

By 1967 projections indicate that there will be 4,673 towboats in service with a combined horsepower of 3,671,225. They will be propelling approximately 16,129 dry cargo barges and scows with a cargo capacity of 15,767,474 net tons and 2,999 tank barges with a capacity in excess of 5 million net tons, or a total of 19,128 carrying vessels providing a total combined capacity of 20,783,090 net tons.

Supplement No. 3, attached to this statement, lists the inland fleet size by type vessel, the towboat horsepower available in an emergency, and the total barge cargo capacity in service for the years during World War II, the Korean conflict and, for comparison, the figures for 1957, the most recent figures available. Also included in this chart are the projected inland fleet statistics to which I have referred for 1962 and 1967. These are 5-year and 10-year projections made on the basis of the most recent figures available to show the size fleet which can reasonably be expected to be available in a national emergency.

THE INLAND WATER CARRIER INDUSTRY'S ABILITY TO PERFORM IN THE EVENT OF MOBILIZATION

Fortunately, the Nation's inland waterway system and the carriers that operate over that system are not exceedingly vulnerable to enemy attack for a number of reasons. Shallow-draft vessels have a normal dispersion different from other modes of transportation. Inland waterway operations are not characterized by large marshaling yards located near high-priority urban targets, or by concentration points such as airports which are high-priority targets in themselves or by intricate cloverleafs or urban throughways which are also generally located near congested metropolitan areas.

In fact, the very nature of the operations of the inland water carrier, particularly on the river and canals reduces his vulnerability to all attacks except the total saturation type atomic attack.

The towboat is seldom tied up at the pier, but rather is continually plying the inland waterway systems transporting its tow of barges.

Recently many inland waterway operators have taken to repairing multiengine vessels on the run during a voyage so that time lost for repair can be reduced to a minimum. This type of repair keeps the towboat on the river and out of the repair yards. It, therefore, tends to keep vital portions of the fleet constantly on the river and away from congested areas and high priority target areas.

In the event of an enemy surprise attack, very few towboats would be found in the high priority attack areas, but rather they would be on the river or canal in operation.

A similar situation exists with respect to barges, although proportionately there are always more barges lying at terminals than there are towboats.

Of course, a number of barges and some towboats will always be found on any given day in high priority target areas, but no more than 10 to 15 percent. Of the vessels which survived attack, depending upon the fallout concentration and the contamination of the water in which they were at the time of the attack, some could possibly be washed free of contamination by the very water on which they ride.

Different from the barges and towboats, the tugboats and shallow-draft self-propelled vessels, especially the tankers, are not as restricted in their use to protected harbors or inland rivers and canals. Inter-harbor traffic, intracoastal carriage and transport across portions of the Gulf of Mexico are not uncommon for these vessels. It is only in recent years, with improvements and modernization in our industry, that barges, the backbone of the shallow-draft fleet, have begun going to sea.

This type of operation adds to the normal dispersion which the shallow-draft industry enjoys. Without minimizing the damage which a concentrated atomic attack could do to lock structures and navigation facilities, the industry as a whole probably would fare comparatively well.

Insofar as the repair of damaged equipment after an attack, or the construction of new equipment to meet the demands of war, is concerned, the inland waterway industry is again in favorable position. It is primarily responsible for the existence and growth of an inland marine shipbuilding and repair industry which numbers some 80 separate facilities widely dispersed along the Nation's inland waterway system.

Inland shipbuilding and repair facilities, under the impetus of World War II needs, were expanded to 140. In addition to the regular inland waterway equipment which these shipyards constructed and kept in repair during the war, over 4,000 war vessels, including LST's, minesweepers, and submarines, were built at these inland river-located shipyards and moved through our inland waterway system to augment the Nation's war effort on the high seas.

The facilities and the skills maintained in these yards are of inestimable value to our defense effort and would be of even greater value in event of attack.

WHERE CAN WE GET THE MOST CARGO CAPACITY WITH THE LEAST STEEL AND DOLLARS?

Also of interest to your subcommittee in the consideration of the Nation's transportation facilities in time of mobilization is the consideration of the optimum or maximum operational ability of the inland water carrier industry. This consideration should take into account the ratio of equipment weight to carrying capacity, insofar as the most beneficial use of the Nation's raw materials is concerned; a consideration of the ratio of equipment cost and fuel consumed to carrying capacity; and the comparison of labor productiveness and maintenance costs with other modes of transportation.

The benchmark against which other modes of transportation are frequently compared is railroad costs of equipment and fuel consumption, and railroad labor productivity and repair costs.

Insofar as inland waterways transportation compares with railroad transportation, the average railroad car weighs 26 tons with an average carrying capacity of 50 tons, while the average barge weighs 170 tons and has a carrying capacity of 900 tons. Therefore barge transportation has a favorable 5-to-1 ratio insofar as equipment weight is concerned compared with the railroad's ratio of 2 to 1.

Insofar as cost of equipment is concerned, a ton of barge space is much more economical than a ton of railroad car space. On the average it costs approximately $120 to provide 1 ton of barge capacity and approximately $320 to provide 1 ton of equivalent railroad car capacity. This means that a defense dollar spent for barge transportation equipment would buy almost three times the cargo capacity that the same dollar invested in railroad equipment would purchase.

The steel which will be required to construct the additional fleet units we expect to be built by 1962 will be of interest. Based on present requirements of an average of 400 tons of steel per vessel, the 273 towing units to be added will require 111,200 tons of steel. Based on an average of 300 tons of steel per vessel, the 1,697 dry-cargo barges expected to be put in service between now and 1962 will require 509,100 tons of steel. The average tank barge now takes approximately 300 tons of steel also, and the 355 new tank barges anticipated by 1962 will require 106,500 tons of steel. A total of 726,800 tons of steel will be required to construct the total 2,330 additional vessels which we anticipate will be added to the fleet between now and 1962.

Looking at this construction picture in a broader aspect, the steel requirements to construct the additional fleet units which will be added between now and 1967 will require 201,600 tons of steel to build the additional 504 towboats, 965,100 tons of steel to build 3,217 dry cargo barges and scows, and 207,000 tons of steel to construct the estimated 690 new tank barges. Therefore, a total of 1,373,700 tons of steel will be needed to construct the additional 4,411 vessels which are expected to be added to the inland fleet by 1967.

These estimates do not take into consideration the other strategic materials which will be needed for piping and wiring and for radio-telecommunications and radar installations, but are just the projected steel requirements alone for the size fleet which is estimated to be in service in the foreseeable future.

During an emergency, the amount of fuel that our Nation's transportation system requires would be of vital concern to our mobilization effort. Barge transportation requires approximately 315 gallons of diesel fuel per 1,000 net ton-miles, as compared with 420 gallons per 1,000 net ton-miles required by railroads.

The effectiveness of any transportation mobilization effort, to a great extent, depends on the most effective utilization of the Nation's manpower resources. Barge transportation provides a very favorable labor productivity comparison in the Nation's defense effort.

The average tow is manned by a crew of from 9 to 15 men. This size crew can handle a 10- to 20-barge tow transporting up to 20,000 tons of freight. A tow of this size is equivalent to about 400 railroad freight cars. To transport this cargo by rail would require a crew of 28 men to man four 100-car freight trains each manned by 7 men. This would be about maximum capacity for such a train and crew. However, the 20,000-ton tow to which I referred would not be the maximum freight capacity that the 15-man barge crew could handle.

If the same boat handled 30,000 tons it would require no additional crewmen. Without any substantial increase in the manpower of the barge crew, the size of the tow could in fact be almost doubled. Especially is this true on the lower Mississippi where tows in excess of 20,000 tons are not uncommon.

Tows of 30,000 tons are frequent, and a single towboat transporting 40,000 tons of freight with a 15-man crew is possible. In comparison, this 40,000-ton load would require 8 railroad trains of 100 cars manned by 56 men with an average of 7 men per train.

A comparison made for a Senate committee last year showed that towboat crews produce 11 million ton-miles per year per crew members; while, eliminating all railroad track maintenance personnel and clerical workers and considering only operating workers, each railroad freight train operating employee is capable of producing only 3½ million ton-miles per year on the basis of Interstate Commerce Commission statistics. Insofar as labor productivity is concerned, barge transtation would place less than one-third the drain on our Nation's manpower resources to generate the same amount of transportation in a mobilization effort as railroad manpower transportation requirements would demand.

The manpower statistics with regard to the requirements for repair and maintenance of equipment are consistently favorable to the savings in labor which barge transportation can give to the Nation in a mobilization effort.

Insofar as maintenance and repair costs are concerned, the average towboat cost per thousand net ton-miles is 22 cents, compared with 62 cents for a locomotive. While it costs, for maintenance and repair, an average of 12 cents per 1,000 net ton-miles to operate a barge, the comparable rail carrier cost is 93 cents for an average per 1,000 net ton-miles.

Finally, in actual cost to the shipper, barge transport service costs approximately 4 mills to carry a ton of freight 1 mile; by rail the cost is in excess of 1 cent, and by truck the cost is more than 6 cents.

These figures speak for themselves, and it may be sufficient just to point out that a consideration of each of the more important factors in a comparison of railroad versus barge transportation in a mobilization effort in each respect gives an indication of the considerable importance that inland waterways transportation must be given in any analysis of our Nation s transportation systems in time of defense.

Barge transportation would require less manpower, less critical materials, and would actually cost less in operation or for repair and maintenance than it would cost to do the same job by any other mode.

GOVERNMENT REGULATORY POLICY AND CONTROLS AFFECTING THE INLAND WATER CARRIER INDUSTRY

The invitation which our association received from your subcommittee requested that the inland water carrier industry testify with regard to the impact which Government regulatory policy and controls have on the industry, especially with regard to their effect on the ability of this mode of transportation in a mobilization effort. This is an important subject for your committee's consideration and one which could vitally affect any national transportation mobilization capability.

The national transportation policy, enunciated by the Congress as a part of the body of law governing regulatory control of surface transportation, is the foundation upon which we are dependent for the welfare of our transport services. This national transportation policy provides for assurances of "fair and impartial regulation of all modes of transportation" so as "to recognize and preserve the inherent advantages of each" mode of transportation.

Nothing has transpired in the growth and development of transport services since the Congress first enunciated this policy in 1940 which causes us to believe that this policy should be changed or amended in any way, either by action of the Congress or by action of the regulatory body charged with interpreting and administering the laws.

We believe it is sound policy. We believe it has demonstrated its soundness in that it has fostered the growth of transportation services to meet fully the needs of a growing Nation both in peacetime and in the event of mobilization.

As a part of this growth of transportation service, we have witnessed the resurgence of shallow-draft water carrier operations to the point where they provide 8.6 percent of our total intercity freight transportation, as compared to only 3½ percent that they were providing in 1947. The demand for the service has fostered technological development of equipment, has fostered the building of the fleet of waterways equipment, and has fostered its use. We have projected our growth estimates for both fleet and service on the premise that the national transportation policy will continue to be the cornerstone of governmental control and regulation. Unless this national transportation policy is continued in full effect, no one can predict with any degree of accuracy the transportation mobilization capabilities of the shallow-draft water carrier industry.

We in this industry believe it is incumbent upon this subcommittee, if the subcommittee is to make a full assessment of our transport mobilization capabilities, to take into consideration certain disturbing trends. I refer specifically to the ratemaking practices of the railroads with respect to competitive traffic. These practices are designed to take every pound of traffic from bargeline competitors which the railroads can get at anything above out-of-pocket costs.

Not only will an examination of the ratemaking practices of the railroads bear out this point, but the statements of railroad officials indicate that this is the plan. In some quarters this may be regarded as sound American competitive practices. To the water carriers, it is an alarming and unsound business practice for the simple reason that our industry cannot survive if predatory competitive ratemaking practices of this kind are to be sanctioned.

Only the dominant mode of transportation, carrying a widely diversified spread of commodities at widely diversified rates, has the financial reserve in traffic income to carry out a program designed to pick up movements at nothing more than something better than out-of-pocket costs. A great majority of the water carriers are dependent for their livelihood upon either single commodity movements or a very limited number of commodity movements. Their equipment and their restricted routes do not permit them to engage in the transportation of a widely diversified group of commodities at diversified rates, some of which are high enough to permit them to absorb losses on other movements which they want to wean away from competitors.

The loss of the movement of a single commodity to a rail carrier may mean little or nothing to the railroads' overall income picture. On the other hand, the loss of a single commodity movement to a water carrier can put him out of business because sometimes this is the only movement he has for his equipment.

Water carriers are disturbed over the possibility of their potential growth being limited and perhaps even stopped if the competitive ratemaking practices of railroads are allowed to continue in the same direction and with the same intensity in the years ahead. I think that this subcommittee, in its assessment of the transport mobilization capabilities, must be aware of this fatal possibility with respect to water carrier operations. Our predictions of the increase in fleet units in the years ahead can be seriously curtailed by this type of competitive techniques, which I suggest is not sanctioned by the national transportation policy.

We do not believe that the Congress, in enunciating the national transportation policy, had in mind the manipulation of this policy in any fashion to allow destructive competition. I realize that the attitude can be taken that the destruction of a carrier beacuse of the interplay of competitive forces is not of serious consequences.

Such an attitude is not based upon an appreciation and understanding of the day-to-day workings of the shallow-draft water carrier industry. The routes over which this industry operates are largely circumscribed and confined to nature's water courses. The commodities for which barges and shallow-draft self-propelled vessels can compete in the trade are limited largely to those commodities which move in these great quantities, which can be accumulated in these large quantities for shipment, and which can be received in these quantities.

These limitations make water carriers easy prey for more versatile competitors who have the desire and the financial ability to put them out of business. I am not suggesting that the water carriers can be put out of business in one fell swoop overnight. But they can be put out of business piece-by-piece very effectively.

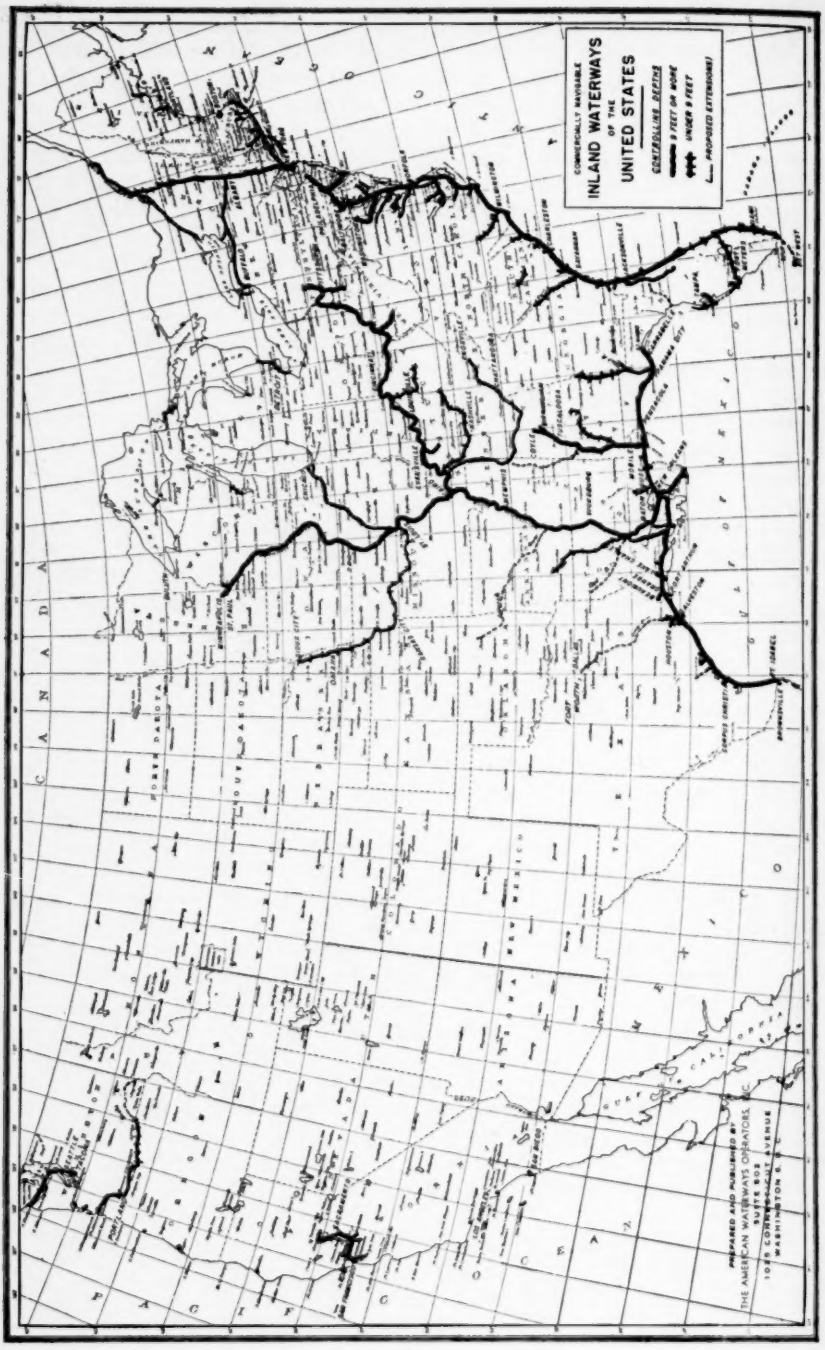
I suggest that it is not in the national interest to allow this to happen.

The best assurance for a strong national transport system for defense purposes and for mobilization needs is to build a strong transport system today.

We can best build it by retaining the individual identities of the various modes under independent ownership and operation, by fostering and preserving the inherent advantages of each mode, and by encouraging coordination of service by the independent modes.

I appreciate the opportunity the committee has given me to present this statement on behalf of the shallow-draft industry, Mr. Chairman.

(The attached map is as follows:)


COMMERCIALLY NAVIGABLE
INLAND WATERWAYS
OF THE
UNITED STATES
CONTROLLING DEPTHS
9 FEET OR MORE
UNDER 9 FEET
PROPOSED EXTENSIONS
CANADA
MEXICO
NORTH DAKOTA
SOUTH DAKOTA
PREPARED AND PUBLISHED BY
THE AMERICAN WATERWAYS OPERATORS
SUITE 503
1025 CONNECTICUT AVENUE
WASHINGTON, D. C.

Ton-miles of freight traffic transported in the United States by railways, motortrucks, Great Lakes, inland waterways, and pipelines, calendar years 1940, 1945, 1950, 1956, and 1957, and percentages of total

[Ton-miles in billions]

Year	Total ton-miles	Railways [1]		Motortrucks		Great Lakes		Inland waterways		Pipelines	
		Ton-miles	Percent of total	Ton-miles	Percent of total	Ton-miles	Percent of total	Ton-miles	Percent of total	Ton-miles	Percent of total
1940	608	375	61.7	51	8.4	96	15.8	22	3.6	64	10.5
1945	1,006	684	68.0	56	5.6	113	11.2	30	3.0	123	12.2
1950	1,010	591	58.5	126	12.5	112	11.1	52	5.1	129	12.8
1956	1,355	651	48.0	254	18.8	110	8.1	110	8.1	230	17.0
1957	1,347	622	46.1	260	19.3	117	8.7	115	8.6	233	17.3

[1] Exclusive of mail and express traffic.

Source: Annual reports of the Interstate Commerce Commission and the Chief of Engineers, U.S. Army. Prepared by the American Waterways Operators, Inc., 1025 Connecticut Ave. NW., Washington, D.C.

Number of vessels on inland waterways of the United States (exclusive of the Great Lakes) for calendar years 1943, 1944, 1945, 1951, 1957, and projected through 1962 and 1967

Types of vessels	1943	1944	1945	1951	1957	1962	1967
SELF-PROPELLED							
Towboats:							
Number of vessels	3,247	3,450	3,303	4,005	4,169	4,447	4,673
Horsepower	(1)	(1)	(1)	1,811,710	2,308,251	2,945,978	3,671,225
NON-SELF-PROPELLED							
Barges and scows (dry cargo):							
Number of vessels	9,607	9,738	9,965	11,424	12,912	14,609	16,129
Capacity (net tons)	6,119,254	6,127,874	6,241,939	8,002,383	10,399,536	12,959,714	15,767,474
Tank barges:							
Number of vessels	1,744	2,013	2,103	3,098	2,309	2,664	2,999
Capacity (net tons)	2,093,808	2,360,755	2,477,187	2,780,069	3,372,221	4,162,340	5,015,616
Total barges and scows (all types):							
Number of vessels	11,351	11,751	12,068	13,522	15,221	17,273	19,128
Capacity (net tons)	8,213,062	8,488,629	8,719,126	10,782,452	13,771,757	17,122,054	20,783,090

[1] Not available.

Source: Corps of Engineers, U.S. Army. Prepared by the American Waterways Operators, Inc., 1025 Connecticut Ave. NW., Washington, D.C.

Mr. KILDAY. Thank you, Mr. Carr. Your statement is very interesting and it will be very helpful to us. We appreciate your coming.

Now, Mr. Robert Carr.

We are glad to have you, Mr. Carr. You may proceed with your statement in your own way.

Mr. ROBERT CARR. Thank you, Mr. Kilday.

Mr. Chairman and members of the Subcommittee on Transportation, my name is Robert A. Carr. I am chairman of the Railway Progress Institute and president of the Dearborn Chemical Co. of Chicago. I am accompanied by Holcombe Parkes, president of the institute, and Philip W. Tone, the institute's legal adviser.

The Railway Progress Institute is the national organization of the railway equipment and supply industry. Its membership is composed of approximately 100 companies which produce manufactured items used by the railroads. These companies represent a fair cross section

of the railway equipment and supply industry, including small, medium, and large organizations.

For the record I will file herewith a list of the railway supply company officers who serve on the institute's executive committee and governing board.

Mr. KILDAY. Without objection, it will be included in the record.

(The material referred to is as follows:)

RAILWAY PROGRESS INSTITUTE

OFFICERS

Robert M. Carr, chairman.
John W. Scallan, vice chairman.
Holcombe Parkes, president.
T. A. Nooner, Jr., vice president-secretary.

EXECUTIVE COMMITTEE

John D. Cannon, president, Morton Manufacturing Co., Chicago.
Robert A. Carr, president, Dearborn Chemical Co., Chicago.
Nelson C. Dezendorf, vice president, General Motors Corp., La Grange, Ill.
Griswold A. Price, assistant vice president, United States Steel Corp., Chicago.
W. Lyle Richeson, vice president-assistant to president, Westinghouse Air Brake Co., Pittsburgh.
John W. Scallan, president, Pullman-Standard Car Manufacturing Co., Chicago.
E. M. Van Winkle, president, Magnus Metal Corp., New York.
R. A. Williams (ex officio), president, Standard Railway Equipment Manufacturing Co., Chicago.

GOVERNING BOARD

C. A. Benz, general sales manager, Chicago Malleable Castings Co., Chicago.
A. D. Bruce, president, Vapor Heating Corp., Chicago.
John D. Cannon, president, Morton Manufacturing Co., Chicago.
R. A. Carr, president, Dearborn Chemical Co., Chicago.
S. S. Conway, president, American Brake Shoe Co., Railroad Products Division, New York.
John F. Corcoran, vice president, Union Asbestos & Rubber Co., Chicago.
N. C. Dezendorf, vice president, General Motors Corp., La Grange, Ill.
L. M. Forncrook, executive vice president, Edgewater Steel Co., Pittsburgh.
C. E. Grigsby, vice president, American Steel Foundries, Chicago.
Edwin Hodge, Jr., chairman, Greenville Steel Car Co., Pittsburgh.
George L. Irvine, vice president, General Electric Co., Chicago.
Roy N. Jenkins, chairman, Alexander & Alexander, Inc., New York.
James G. Lyne, chairman, Simmons-Boardman Publishing Corp., New York.
J. A. MacLean, Jr., president, MacLean-Fogg Lock Nut Co., Chicago.
W. S. McChesney, manager, industrial sales, Aluminum Co. of America, Pittsburgh.
Wilson H. Moriarty, vice president, National Malleable & Steel Castings Co., Cleveland.
Spencer D. Moseley, assistant to the president, General American Transportation Corp., Chicago.
Thomas W. Pettus, president, Scullin Steel Co., Division of Universal Marion Corp., St. Louis.
Griswold A. Price, assistant vice president, United States Steel Corp., Chicago.
W. Lyle Richeson, vice president-assistant to president, Westinghouse Air Brake Co., Pittsburgh.
H. H. Rogge, president, American Car & Foundry Division, ACF Industries, Inc., New York.
Max K. Ruppert, president, Poor & Co., Chicago.
John W. Scallan, president, Pullman-Standard Car Manufacturing Co., Chicago.
Arthur H. Smith, executive vice president, the Kerite Co., New York.
Hynes Sparks, chairman of the board, Symington Wayne Corp., New York.
Frank Speno, Jr., president, Frank Speno Railroad Ballast Cleaning Co., Inc., Summit, N.J.
S. C. Stafford, president, the Adams & Westlake Co., Elkhart, Ind.
E. M. Van Winkle, president, Magnus Metal Corp., New York.

S. J. Walker, president, Chicago Railway Equipment Co., Chicago.
David R. Watson, president, Modern Railroads, Chicago.
Charles P. Whitehead, president, General Steel Castings Corp., Granite City, Ill.
R. A. Williams, president, Standard Railway Equipment Manufacturing Co., Chicago.
C. T. Zaoral, president, the New York Air Brake Co., New York.

Mr. ROBERT CARR. Perhaps I should explain that the railway equipment and supply industry employs about as many workers as do the railroads themselves; that its plants, offices, and warehouses are located in almost every industrial city and in every State in the Union; and that the volume of its sales to the class I railroads normally range between $2 billion and $3½ billion a year, which is a sizable segment of our national economy. Moreover, most of these bills of dollars flow into the purchase, by the suppliers, of the raw materials and manufactured products they need, thus spreading the benefits of railroad purchases into every section of our land.

First, may I express to this subcommittee and to its parent, the House Committee on Armed Services, the institute's appreciation for the scheduling of these hearings while there is still time to give careful consideration to a vital phase of national preparedness. We are impressed by the broadness of your inquiry; by the obvious care you have taken to hear all interested parties; and by the encouraging objectiveness of the questions you have asked of those who have been invited to participate. We believe that you are performing a great public service, perfectly timed and constructively designed. The Nation, its Defense Establishment, and its transport agencies are all indebted to you for your vision and your understanding.

My main purpose here today is to submit, on behalf of the institute and the industry it represents, a series of four statements pertinent to your inquiry. Copies of these statements have been delivered to Mr. William H. Sandweg, your special counsel, and are available now. And I ask that they be made a part of the record.

Mr. KILDAY. Without objection, they will be included in the record.

STATEMENT OF ROBERT A. CARR, CHAIRMAN, RAILWAY PROGRESS INSTITUTE AND PRESIDENT, DEARBORN CHEMICAL CO.

You have asked the Railway Progress Institute to submit testimony on the potential of the railway supply and equipment industry to provide additional equipment if and when needed in the event of mobilization.

Immediately upon receipt of your invitation to participate in these hearings, we asked the member companies of the institute to give us their individual answers to the specific questions incorporated in the letter of invitation. Our inquiry was sent out on June 17 and we asked for answers by June 24. Obviously, we could not expect a 100 percent response nor detailed replies, but we have received enough answers to point to certain general conclusions, which, I might add, are encouraging insofar as the ability of the railway supply industry to step up its production of the locomotives, cars, equipment, and other facilities which may be needed by the railroads in the event of a national emergency.

Summarizing what we have been told by those member companies which answered our request for information—and I repeat that what we have is only a cross section of the huge railway supply industry—I think that it is reasonably accurate to report:

It appears evident that the depressed condition of railroad buying in 1958 has enabled the supply industry to devote time and effort to the improvement of its physical plants, with a consequent increase in productive efficiency. As a result, the present physical condition of this industry is excellent and should remain so for the next few years, at least. And it will improve, of course, if our member companies get more railroad orders to work on.

Indicative of this situation is the statement of one producer of an item used in the building, rebuilding, and repair of freight cars. He states that present pro-

duction of this item is sufficient for 1,000 cars per month, while the capacity of his plant is 12,000 car sets per month. This is not an extreme case. Another manufacturer states: "We have made preparation for expansion by having duplicate machinery, all new, available now for future needs."

There are some exceptions, however, to these encouraging reports. As one manufacturer puts it:

"Our physical status is substandard because of the depressed condition of our railway business and the uncertainty of its future. We could not afford to make expenditures aimed at quick expansion of our manufacturing facilities."

The railway equipment and supply industry has always been plagued by a feast or famine volume of business. The present situation illustrates this point. The industry is now in the midst of a period of fairly high production after having suffered one of the most disastrous years in its history. That railway supply companies are able to survive these wide fluctuations in business volume is, in itself, indicative of the basic stamina that the industry possesses.

However, it should be pointed out in this connection that many companies have embarked upon programs of diversification, some of which are well advanced at this time. This trend, which is a direct result of the feast or famine nature of railway purchases, if continued, will eventually endanger the mobilization support which the industry can provide for the railroads.

I hasten to add that the railroads are not entirely responsible for this condition. Under present conditions, they are unable to set aside funds for regularized programs of expansion and improvement; nor can they realistically amortize the equipment and facilities they do purchase.

At the moment, the production capability of the railway equipment and supply industry is more than adequate for present or anticipated demands. Our trouble now is, frankly, surplus capacity.

All replies—from other than car and locomotive builders which will be covered later—indicate that, as a practical matter, production with existing facilities could be doubled if the need arises.

The suppliers of freight car component parts indicate that they can support a 10,000-car-per-month program with present plants and facilities.

Makers of track maintenance equipment indicate that production can be very greatly expanded.

Signal manufacturers report a substantial margin, enabling them to increase production up to 100 percent.

Suppliers of ties and timber products report ample facilities, provided sufficient leadtime—60 days—is given.

In the case of steel castings, car body components, track materials, brakeshoes, and ties and timber products, all replies indicate the adequacy of present production facilities to meet the demands of an emergency comparable to World War II or Korea. Pertinent to this situation is the necessity of having assurance that the industries' facilities will not be diverted to military production of nonrailroad material in large amounts.

One manufacturer of steel castings has this to say about diversion to military production:

"In the event of war our production with present facilities could be expanded to 5,000 tons of steel castings per month. However, in the event of war we are committed through 1961 with the Ordnance Department of produce, ordnance castings, [which] would take up to 2,000 tons per month of our melting capacity. On this basis, 3,000 tons would be available for railroad production."

He adds that the remaining balance would be about 75 percent of present railroad production.

Because of the wholesale replacement of steam with diesel locomotives within the past 20 years, the railroads are today in reasonably good shape to handle a sizable increase in traffic without encountering a shortage of motive power. It is the general opinion that one diesel unit is the equivalent of two steam locomotives. Assuming this is true, the railroads in 1958 had a power fleet 22 percent larger than they had in 1944 when they did such a superlative job of handling the traffic of World War II.

The replies to our inquiry produced an estimate that the maximum productive capacity of the Nation's locomotive builders is about 250 units per month, or at a rate of 10 units per day with a 6-day workweek, provided that there is 6 months' advance notice of the need for this maximum production; that the necessary materials are available in sufficient quantity; and that an additional work force of between 5,000 and 6,500 men can be recruited.

As an interesting sidelight to this estimate, it has been figured that a 25-percent increase in the annual volume of intercity railroad ton-miles, as compared with

the average for the past 8 years, would require 2,000 additional diesel units which would take 200 working days to produce. Similarly, a 50-percent increase would call for 5,000 additional units and require 500 working days to produce; and a 100-percent increase, 12,000 additional units and 1,200 working days.

At present, manpower is available for expansion in most areas of the industry with the possible exception of harvesting ties and timber. There is no problem in the processing and wood preserving segments of this production.

Regarding manpower needs in time of emergency, there is a serious doubt as to the ability of some parts of the railway supply industry to secure an adequate working force. The harvesting of timber is one of these segments. Skilled trades for foundry products are not now being trained for more than present needs; thus, in time of emergency, accelerated training would permit manning increased output, but only at a sacrifice of efficiency and economy. For instance, a foundry located in one of the interior States estimates that 6 months' leadtime would be required for a manpower build up in that area of the country.

Electronic and signal manufacturers also anticipate a shortage of professional men and skilled workmen in an emergency. Other segments of the railway equipment and supply industry report that they expect a repeat of the manpower shortages of World War II, which may be partly overcome by careful planning based on past experience. If done successfully this should permit them to meet emergency manpower needs.

Regarding materials, all segments of our industry express concern over an adequate emergency supply. The current accelerated production program has again shown that there is not sufficient heavy steel plate production. This could become a significant bottleneck when, in time of mobilization, heavy carbuilding and repair work must compete for steel with shipbuilding; tanks, and armament. Bearing manufacturers indicate that material supply would not be a difficulty, provided there is no interference with the orderly return of scrapped bearings from the railroads on a conversion basis. Signal and electronics manufacturers contemplate shortages in copper, 2.5 percent silicon steel, platinum, nickel, zinc, tin, lead, and other strategic materials.

All manufacturers expect a controlled material plan to be put into effect during an emergency. In this regard, our industry now has a Railway Supply Industry Advisory Committee under the auspices of the BDSA. Inasmuch as this industry advisory committee has been organized for almost a year and can be quickly activated in case of mobilization, the industry should be in a position to plan material allocation and mobilization production with a minimum of delay and confusion.

Apparently only those supply companies whose plants are located in centers which have been surveyed by Ordnance are in a position to comment on the question of susceptibility to damage and restoration in the case of destruction. There is some indication of nonindustrial storage of microfilmed vital records. In general, however, little or no evaluation has been given to plant dispersal or other means of meeting such contingencies.

Similarly, there is in this quick survey no indication of stockpiling other than that incident to normal commercial needs; and apparently none is contemplated for emergency. In fact, the railroads today seem to feel that they must carry considerably less inventory and they have greatly curtailed the stockpiling of parts and materials. Thus it is anticipated that, at the outset of mobilization, some shortages of parts and materials will occur. Again, it is well to emphasize that this situation is due, not to lack of need by the railroads, but to lack of funds.

In general, our manufacturers do not advocate stockpiling, presumably on the theory that stockpiling may lead to obsolescence or the stultification of technological progress. One exception to this may be found in the case of signal materials. This problem has been brought to our attention by both of the large integrated signal manufacturers.

In view of the fact that the number of manufacturers capable of producing complete signal systems is limited, and considering that electronic materials can be expected to be in critical supply in an emergency, it might be desirable to stock certain selected supplies at strategic points.

Control towers are the nerve centers of railway traffic movement and are vulnerable to damage from attack or sabotage. Destroying, or even damaging, such centers would immediately hamper railroad operations throughout a wide area. Therefore, while signal manufacturers report that in 180 days and with proper authorizations, they can double the normal production of service parts, the danger of slowing down rail traffic due to the damage or failure of a nerve center gives good cause for considering the strategic stockpiling of signal materials at least.

Consideration may well be given also to the strategic stocking of readily substituted complete control units. Such a program could only be undertaken by the Government.

Railway suppliers apparently have a very real grasp of the railroad problem, judging from the answers we have received. The major emphasis in these replies was placed on a buildup of the railway plant now. Only a modern, healthy railroad industry has the capacity to expand in the explosive fashion which an emergency demands. Railroads have a vast inherent elasticity, but in order to provide the necessary reserves of equipment, capital facilities, and manpower to expand rapidly, they must be able to conduct their peacetime business in an atmosphere of profitable and sustained progress. This is not the case today; and this situation is primarily due to conditions which I am sure will be covered in detail during the course of these hearings.

In general, our survey has confirmed our belief that our industry is in good physical condition; we have plenty of surplus productive capacity now; and we could greatly increase our production with existing facilities if the need arises, providing we do not encounter insurmountable problems of manpower, material supply, and the diversion of our plants to military production.

Some of my associates in the institute will amplify this opening statement, particularly insofar as the vital freight and passenger car situation is concerned, the production of other equipment and supplies, and our collective view as to the steps that should be taken now to insure the adequacy of rail transportation to support the national defense effort in the event of emergency and mobilization.

STATEMENT OF JOHN W. SCALLAN, VICE CHAIRMAN, RAILWAY PROGRESS INSTITUTE, AND PRESIDENT, PULLMAN-STANDARD, A DIVISION OF PULLMAN, INC.

The questions posed in the chairman's letter to the Railway Progress Institute are very broad in scope and, as far as the commercial freight- and passenger-car building industry is concerned, a detailed response to each point would be quite lengthy. All of the information requested could not possibly have been collected in the time available.

The commercial carbuilding industry, however, has gathered together the following general information with respect to the present capacity and potential capabilities of its plants. It is hoped that this will be satisfactory for the subcommittee's present purposes. If it is not sufficient, it can at least form the basis for subsequent lengthier and more detailed studies.

This statement is divided into two parts, the first dealing with rail freight equipment and the second with the rail-passenger situation.

Answers to all of these questions will indicate the overall situation of the eight major commercial freight-car builders in the United States—American Car & Foundry Division of ACF Industries, Inc., with plants in Berwick, Pa., Huntington, W. Va., St. Louis, Mo., and Milton, Pa.; Bethlehem Steel Co., with a plant in Johnstown, Pa.; General American Transportation Corp., with shops in East Chicago, Ind., Sharon, Pa., and Kansas City, Kans.; Greenville Steel Car Co., with a plant in Greenville, Pa.; Magor Car Corp., with a plant in Clifton, N.J.; Pacific Car & Foundry, with a plant in Renton, Wash.; Pullman-Standard, with freight-car building plants in Michigan City and Hammond, Ind., Butler, Pa., and Bessemer, Ala.; and Thrall Car Manufacturing Co., with a plant in Chicago Heights, Ill.

For the purpose of this report, the term "commercial carbuilder" is used to describe the foregoing companies and to distinguish them from the captive shops owned by the railroads themselves.

As to the physical ability of the commercial carbuilding industry to handle the present needs of the Nation's railroads, the job can be done with available plant, material, and manpower supplies.

Historically, there has never been a time when the carbuilders were not in a position to fill the demand for new cars when materials and orders were in balance. In the periods of heavy car buying, the only limiting factor in the industry's production has been a shortgage of materials, for abnormal car-ordering programs have generally coincided with periods of great economic activity and high national production levels.

Rather than a capacity to produce, the carbuilders' fundamental problem has been one of the inability of the railroads to order cars on a more uniform, year-to-year basis.

Traditionally, the carbuilding business has been a feast or famine experience, and this is amply evidenced by the new freight car order record over any period of years you choose to inspect. Bearing in mind that total new orders averaged 69,000 cars per year for the past 13 years (an average exceeded by commercial carbuilders alone in 1948, with 83,000 cars delivered), following are examples of new orders in individual years during this period: 1946, 67,000 cars; 1947, 120,000 cars; 1948, 93,000 cars; 1949, 6,000 cars; 1950, 155,000 cars; 1951, 92,000 cars, 1952, 34,000 cars; 1953, 33,000 cars; 1954, 22,000 cars; 1955, 162,000 cars; 1956, 39,000 cars; 1957, 41,000 cars; 1958, 17,000 cars; 1959 (6 months), 33,000 cars.

It should be borne in mind that not all of these cars were ordered from commercial carbuilders, for approximately 33 percent of the orders were placed with our principal competitors, the railroad-owned shops.

The figures show, however, that there is no regular pattern or cycle to the fluctuations. There does not seem to be any combination of statistical indicators on which to base scientific forecasts of new orders. Obviously, with the ever-increasing necessity for some year-to-year stability in orders, the freight-car building business is one that does not offer its owners any feeling of complacency. As a consequence, almost every commercial carbuilder has diversified to some extent in recent years.

However, with present facilities, the maximum capacity of the commercial carbuilding industry in a time of emergency would be approximately 115,000 cars per year, providing materials and manpower are available, some standardization of design is achieved, there is no diversion to other war production, capital equipment worn out by the strain of maximum production can be replaced, and a 6-day workweek is possible. To the best of the carbuilder's ability, that answers the chairman's question with regard to the use of present plant facilities to maximum capacity.

With regard to the construction of new plants, we would be hard put to make any estimate in the absence of some set production goal. This question of new plants, however, is academic in our opinion since in the event of war there would not be sufficient time nor materials with which to erect them. Further, supplies of extra steel and machine tools needed to equip the new plants would not be available.

However, as a guide to the subcommittee, the following very rough estimates on the construction of new plants is made. These are based on the best judgment of experienced people in the car building business. The most efficient plant to build would be one with two erection tracks and a total output of 50 cars a day. This plant would cost somewhere in the neighborhood of $24 to $30 million. To get the plant into full production, under ideal conditions, would require 18 to 24 months.

Thus just about any amount of freight car production could be obtained by building the desired number of new plants, if car builders were given the time, the manpower, and the materials.

It is the opinion of the carbuilding industry that the manpower and material situation in an emergency would be critical. On the average, a boxcar will require 12½ to 15 tons of steel. On top of this, another 1½ tons of steel must be furnished suppliers for specialty items with which to equip the cars. Combining this tonnage figure with the maximum production rates given previously would require approximately 2 million tons of steel annually to operate at a maximum capacity in present plants. Our theoretical new plant, if built, would need approximately another 300,000 tons of steel per year.

Stockpiling of freight cars and materials on any scale would be uneconomical. The best answer to providing sufficient cars to meet any emergency is to provide an atmosphere of economic well-being for the Nation's railroads so that they will be in a position to order and maintain adequate fleets of cars on a year-to-year basis.

The carbuilding industry generally has made no specific plans for restoration of plants damaged or destroyed by enemy action. Plant damage would obviously have to be dealt with in light of the situation existing at the time of the damage. Replacement of plants completely destroyed would have to follow the criteria previously mentioned for construction of a new carbuilding plant.

In summary, it is felt that the commercial carbuilding industry has far more than enough capacity to meet the peacetime demands of the railroad industry for freight cars. But the situation in the event of emergency would depend on a number of variables about which it is difficult to be specific at this time. The first thing that should be done is to set some production goal of quantities and

types of cars required. With such a goal, the industry could make a far more intelligent estimate of its ability to meet an emergency.

As to passenger cars, the average number of passenger-carrying cars built for domestic U.S. railroads during the past 5 years, excluding subway cars, averaged 197 cars per year. During this same period, however, the passenger-car fleet of the railroads decreased from 26,000 to 21,000 cars.

There are only five passenger car building plants remaining in the United States, most of them on a standby, shutdown basis, or nearly so. These include the Berwick, Pa., plant of American Car & Foundry; the Philadelphia plant of the Budd Co.; the Worcester, Mass., and Chicago plants of Pullman-Standard, and the St. Louis plant of the St. Louis Car Co. The productive capacity of these remaining plants is declining steadily because of nonuse. Theoretically, each 1 of these plants could produce approximately 150 to 200 passenger cars per year, but it is doubtful that sufficient skilled manpower will be waiting to be recruited if later required.

The passenger car building industry has not built a sleeping car since February 1958, when two were delivered. In 1957, only one sleeping car was built. This means the industry would be hard put to build sleeping cars in the event of war because the extensive know-how required for this type of car is fading rapidly.

Material supply insofar as the passenger-car business is concerned in the event of an emergency would be totally dependent on allocations made to the industry for the types of cars to be built. Much of the material for passenger cars is special—such as brass, wiring, motors, etc.—and would undoubtedly be in short supply during an emergency.

In summary, it is believed that existing passenger-car plants could produce any foreseeable demand, but unless passenger-car orders are forthcoming promptly, most of the productive capacity will be lost forever because the industry cannot afford to keep these costly facilities idle on a standby basis.

STATEMENT OF MR. C. E. GRIGSBY, CHAIRMAN, COMMITTEE ON EMERGENCY PLANNING, RAILWAY PROGRESS INSTITUTE, AND VICE PRESIDENT AND GENERAL MANAGER TRANSPORTATION EQUIPMENT DIVISION, AMERICAN STEEL FOUNDRIES

The chairman, in his letter of invitation addressed to the railway progress on June 15, suggested several areas of consideration for our guidance in preparing testimony. I would like to cover these areas primarily as they apply to that part of the railway equipment and supply industry which manufactures component parts used in the construction of freight cars.

The total freight-car ownership of the railroads and of the private car lines is approximately 2 million units, as compared with about 21,000 passenger-carrying cars and 30,000 locomotive units. Therefore, it is reasonable to expect that any rail mobilization program would be based largely on freight car needs and that the material and labor requirements for freight cars would surpass those for other forms of rail equipment.

The items needed for any freight-car program can be generally classified into five categories:

1. Truck assemblies: The principal items being side frames, bolsters, wheels, axles, springs, and journal box or bearing assemblies.
2. Brake rigging, including brake valves, air cylinders, airline connections, levers, brake beams, and brakeshoes.
3. Draft rigging, including couplers, yokes, and draft gears.
4. Underframes made up almost entirely of steel shapes.
5. Superstructures or car bodies which, depending upon the type of car, include corrugated-steel ends, doors, roofs, running boards, hopper-door frames, steel or wood interiors, and steelplate sections forming the sides of the car.

The manufacturers of these products have devoted much time and money in the past decade to the improvement of plant facilities and methods of manufacture. Today their physical, technological, and economic status is better than it has ever been. Nevertheless, much of the present capacity of the industry can can best be labeled as "surplus."

Probably no other industry has been subject to more violent business fluctuations than the railway equipment and supply industry. This is readily traceable to the financial position of the railroads. Their rate of return on investment has been chronically substandard. This places them in the position, in subnormal periods, of delaying equipment purchases until well after increased traffic has produced revenues for such acquisitions.

With the time element necessary for the construction of cars and with prior demand for steel and other important materials already established by other industries, freight-car shortages inevitably result when equipment is most needed. It is for reasons such as this that the equipment industry has long continued on an overexpanded basis. The industry must provide for the intermittent high peaks of demand while suffering much of the time under low rates of production. As a result, many companies in this field have been forced to take a hard, cold look at their immediate and long-term operating results. There have been numerous instances where facilities have had to be discontinued after long association with the railroad industry. In other instances, companies have found it expedient to diversify by entering other fields of manufacture. Such decisions are not easy for management since they are usually accompanied by large capital outlays and introduce elements of uncertainty as to the success of such ventures.

In spite of such changes taking place in our industry, however, I am confident that the component manufacturers would encounter little difficulty in meeting any contemplated or foreseeable car construction program.

Regarding actual expansion of facilities, some further comments are in order. While the potential exists, it is difficult for management to think in terms of expansion in the face of the industry's surplus capacity and unless car-building facilities in excess of those existing today come into being. The performance of our industry in World War II and during the Korean crisis established the adequacy of facilities to cope fully with such emergencies. Should unprecedented demands dictate enlarged facilities, a survey of a large segment of our industry indicates that a 10 to 15 percent increase above our present maximum capacity could be accomplished within the limits of present plant locations. Such an expansion could be attained only at a very substantial cost and, considering the difficulty of securing manufacturing facilities, men, and materials in times of duress, would require at least a year's time to accomplish.

It was my privilege to serve with the War Production Board during 1943 and 1944. During that time I was associated with the Steel Division and represented the steel-castings industry. I have continued my interest in matters affecting our Nation in emergencies and am at present a member of the BDSA executive reserve program. One of our greatest handicaps upon entering World War II was a lack of organization within our own industry. For reasons which I will outline later, I believe that we are in a much more favorable position today.

Of prime consideration in planning mobilization production is a knowledge of what is expected of us. For example, in World War II, our industry produced a myriad of military ordnance products, supplementing its normal production for domestic railroad equipment and special components for military oversea railway cars. Tank turrets, gunmounts, small arms weapons and parts, aircraft wings, tail and landing gear assemblies, landing mats, amphibious warfare vehicles, and many other military items were turned out in large quantities from facilities normally devoted to the production of transportation equipment. We can reasonably expect similar demands upon our facilities in any future emergency.

It is our understanding that the full production capacity of some of the commercial car builders has already been reserved by the armed services on so-called M-day orders. The nature of these requirements and their effect on the component manufacturers is not known. Such knowledge is a prerequisite to mobilization planning by our industry.

During the period of 1943 through 1946, approximately 138,000 freight cars were delivered for oversea service. A large proportion of these cars were of a relatively low capacity, expandable four-wheel type not found in this country. The balance, while resembling the domestic type of car, presented unusual production problems to component manufacturers because of different track gages and other conditions peculiar to the type of equipment needed for the various theaters of war.

It is only logical to assume that mobilization would again draw heavily on our facilities for manufacturing, not only critical items of a strictly military nature, but also special oversea railroad equipment which would have to be superimposed on our production facilities for domestic equipment.

The situation of our industry today regarding mobilization demands, in one very important respect, is quite different from that of 1940–41. Prior to our participation in World War II, the railroads owned substantially more freight cars than they needed to cover peacetime requirements. Striking evidence of this is found in the fact that an increase in freight car ownership of less than 7 percent enabled the railroads to successfully handle a tremendous wartime burden. Today that reserve strength does not exist.

The railroads' freight car fleet is now in such condition that, under present peacetime conditions, a shortage of cars appears to be imminent. Thus it is obvious to us that a far greater burden would be imposed on equipment manufacturers in a future emergency and that, as a nation, we are already late in getting started.

I believe that our industry is better organized than it ever has been to meet emergency situations. The Railway Progress Institute on whose behalf I am offering this statement was not in existence during World War II or Korea. One of its first efforts was to undertake a serious study of the problems for which this hearing is being held. Our committee on emergency planning has been functioning almost since the inception of the institute in 1955 and was instrumental in the establishment of a Railway Supply Industry Advisory Committee with the Business and Defense Services Administration of the Department of Commerce. I am privileged to be a member of this Advisory Committee, which includes representatives of every major segment of the railway equipment industry. It thus has a nucleus of seasoned supply executives and would be capable of expansion in emergency so that each segment would be effectively represented. Meanwhile, the Advisory Committee can provide a highly desirable source of information which will keep us abreast of developments and will go a long way to obviate much of the confusion that existed at the outset of World War II, which caught our industry unprepared. I should add that our own committee on emergency planning is a permanent organization enabling the members of the institute to keep constantly informed of developments.

Material supply today is not a serious problem for our industry. Manpower, too, is currently adequate. But with fluctuations in production from low to high, and reverse, companies in our industry are continually confronted with the permanent loss of skilled help to other industries that can offer more stable employment.

In the case of any wartime emergency, the supply of labor becomes a serious national problem. In case of future mobilization, with our considerable technological improvement and our previous experience in importing labor, it is our opinion, however, that manpower would not be an insurmountable hurdle.

As to shortage of material in the event of mobilization, such basic materials as steel, copper, nickel, etc., are bound to be in short supply. In the early part of World War II, the railway equipment industry was severely handicapped for material supplies and it was not until the latter stages of the war that a better material procurement plan helped to alleviate this situation. It is our understanding that a greatly improved Defense Materials System is soon to be released. Any such system must give weight to the critical nature of the end product. It should be unnecessary to emphasize that transportation is an absolutely basic and vital key to mobilization plans and must be allowed to function to the fullest extent in order to avoid a paralyzing effect on all industry. We are hopeful that the new Defense Materials System will so recognize transportation and offer a real improvement based on our experiences in World War II and Korea.

Of major significance to this subcommittee is a classification of the items used in freight car construction according to the basic materials used. Let us take, for example, a typical 50-ton box car weighing in the neighborhood of 46,600 pounds, designed with solid bearings, rolled steel wheels, and all wood floorings and interiors. The makeup of materials for such a car would be something like this:

	Pounds
Rolled steel shapes, plates and other end products	32,040
Cast steel products	5,360
Lumber	4,800
All other materials	4,400

In gondolas and hopper cars, lumber becomes negligible and the proportion of basic steel products considerably higher. During World War II, steel supply became very critical and its conservation was of prime importance. Compromises were made, largely through the increased use of lumber as a substitute for steel products. Composite steel and wood cars were designed with consequent shorter life expectancy. Obviously, such cars were not considered desirable by the purchasing railroads, but they accepted them in the interest of getting the important overall job done.

If previous experiences are repeated, basic steel, and particularly rolled steel plates, with its high proportionate use in every freight car, becomes the most critical item and should receive the greatest amount of attention in the scheduling of railroad mobilization production. While cast steel specialties, which are less

dependent on the use of critical materials, might be readily available for a carbuilding program, they would have no application unless steel shapes and plates were available for the underframes, doors, roofs, sides, ends, etc.

The construction of freight cars is largely dependent upon the assembly of component parts processed or fabricated by many suppliers. No single shop is tooled or equipped to produce all of the parts required to build a complete freight car. So, for any emergency carbuilding program, each of these many suppliers is equally dependent upon material, manpower and all the factors that will enable him to meet carbuilding schedules.

Two typical examples of shortages occurring during World War II were steel wheels and malleable iron handbrake wheels. Malleable iron, because of its great demand in the manufacture of military vehicles, was especially critical and, for a time, freight car handbrake wheels made of this material were almost unobtainable. No substitute material could be developed in time so that one small single item was responsible for withholding completion of many vitally needed freight cars.

Many railroads, prior to World War II, had adopted steel wheels as an improvement over cast iron designs. When steel became a short supply item, these roads were obligated to accept the cast iron wheel in lieu of the preferred product. Such substitutions would again be likely in the event of mobilization in the near future, because the production of steel wheels is not yet at a point where it could satisfy emergency demand.

The railway equipment and supply industry is made up of hundreds of manufacturers varying from one- or two-man shops to billion dollar corporations. It is an old industry, having originated in the 1840's and, therefore, is largely situated in the industrial areas east and north of the Mississippi and Ohio rivers. More than 54 percent of the transportation equipment industry is located in or near our 17 largest cities. Thus, while the various plants producing a similar railroad product may be widely separated from each other, by and large, they are all in what are commonly considered to be prime industrial target areas. Unfortunately, little consideration has been given to damage or destruction from attack or to the difficulties of reconstruction except in the case of a few, large suppliers. Such consideration on an industrywide basis becomes a study in itself; one which could be undertaken only by persons with considerable understanding, insight, and knowledge of the subject. There has been some educational work in this area, but additional stimulation from Washington is necessary before a real program can be developed.

Regarding stockpiling, none to my knowledge has been done and none is contemplated for emergency. Component manufacturers have a policy of not carrying a larger inventory than good business practice dictates. Also, since the Korean conflict, there has been a definite shift in railroad policy affecting inventories. Today, railroads carry considerably smaller inventories than in the past. This, too, is in marked contrast to the situation at the outset of World War II, and is another indication that we would be called upon for greater productive effort than heretofore.

I should like to mention the Institute's former committee on stockpiling. This is the predecessor group to our present committee on emergency planning. I served as a member of that committee, although not as its chairman. I believe a review of that committee's conclusions as to stockpiling is pertinent to this subject:

"As to the matter of stockpiling, this committee feels it is not feasible for the following reasons:

"1. It would be difficult to determine exactly what parts to carry in the stockpile unless such parts were for predetermined standard cars or 'frozen' designs. This reduces the incentive for progress in the equipment industry.

"2. Many parts would suffer deterioration and might be unsuitable for use when needed.

"3. Stockpiling would increase costs due to added transportation, storage expense, insurance, bookkeeping, and obsolescence."

Because of the great number of variations in car design (which is equally true of specialties and component parts), it is the general practice in our industry to manufacture our products to the specific design requirements of the railroads and to coordinate our shipments with the scheduling program established by the builder of the cars. In our judgment, very little could be gained by stockpiling of parts, and the only feasible stockpile would be in the form of completed freight cars in service.

In view of the present condition of the railroads' freight car fleet, the mobilization demand on our industry would be far greater than any we have experienced if steps are not taken to make more equipment available before an emergency hits us. Such a move is essential, not only to assure that adequate equipment can be furnished under mobilization conditions, but because every freight car, passenger car, or locomotive built today means just that much more critical material available for military use when such demands are most vital to national defense. Furthermore, unlike items of a strictly military nature that can become obsolete overnight by the creation of new types of weapons, the freight cars which are built today will help satisfy the need for the modernization and greater carrying capacity demanded by our Nation's peacetime commerce. At the same time, new cars would immediately begin to pay their own way as an integral part of the present freight car fleet.

In conclusion, the following represent some of the steps that might be taken toward emergency planning:

Plans might be made to appoint a joint committee from railroad, military, and railway equipment sources to consider freight car construction as a preparedness measure. The need for cross-checking among military ordnance, military transportation, and civilian railway needs is already apparent. Such a committee might well be able to resolve this problem to the end that the suppliers will have a better knowledge of their mobilization responsibilities and thus effect more accurate mobilization scheduling and programing. Such a committee could also plan and devise in advance the standardized principles of car construction advisable during emergency periods. This would result in maximum conservation of highly critical materials.

As an emergency measure only, because of the strategic need for other vital purposes of those facilities normally devoted to the production of rolled steel wheels, as experienced in World War II, consideration might be given to the standby maintenance of some of the cast iron wheel facilities which are now fast being discarded as obsolete.

In consideration of materials allocations for emergency, some weight should be given to the preservation of the existing system of orderly return by the railroads to the manufacturers of scrapped bearings on the conversion basis.

Only an industry which is allowed to conduct its peacetime business so that it may grow and progress in a manner consistent with that of the rest of the Nation can be expected to meet the extraordinary demands of mobilization. This means that the time to do something about rail transportation is now—not after an emergency is upon us.

STATEMENT OF R. ARTHUR WILLIAMS, PRESIDENT, STANDARD RAILWAY EQUIPMENT MANUFACTURING CO.*

One special reason for my participation in these hearings is the fact that, as chairman of the institute, I testified before the Surface Transportation Subcommittee of the Senate Committee on Interstate and Foreign Commerce on January 17, 1958, and the Subcommittee on Transportation and Communications of the House Interstate and Foreign Commerce Committee on May 22, 1958—in both cases advocating certain remedial actions by the Congress; actions which I want to recommend again for your consideration.

Three of my associates in the railway equipment and supply business have submitted statements for your record. They have pointed out the basic strength of our industry. They have told you of the surplus capacity we now have to produce the things that the railroads need and want. They have indicated the extent to which our production can be expanded in the event of emergency or mobilization. And they have given assurances that they will go "all out" to produce whatever is needed by the railroads, providing they can get the materials and manpower necessary and they are not diverted to the production of other military needs.

It must be clear by now that, come any national emergency, the railroads and their suppliers will do the very best they can to meet every demand that may be made upon them. But I submit that this dedication is no more than the duty of every element of our free society.

Perhaps these assurances of some expansion potential and these declarations of good intentions in the event of emergency or mobilization are enough for the present purposes of the subcommittee. But we believe that your inquiry is motivated by a desire to do more than merely assess the adequacy of our Nation's transportation facilities. We believe that your deeper concern is to uncover and explore ways and means by which transportation adequacy can be reasonably

assured when E-day or M-day comes. We believe that you would complete these hearings with great satisfaction if the railroads demonstrate that they are prepared now to handle the peak loads of national defense and the civilian needs of our country, and we could tell you that we have the capacity to supply all the additional locomotives, cars and other facilities that may be required. In this case, you could report, with confidence, that one vital arm of national defense, rail transportation, is truly ready to meet any foreseeable need.

But frankly, gentlemen, this is impossible, in our opinion. We do not know when the day of emergency or mobilization will come. We do not know what the subsequent demands for material or manpower or arms production will be. And we have only a hazy idea of the total size of the transport load which will have to be carried to support national defense and our civilian economy. All we can surmise is that our rail transportation plant is not now prepared to handle a sudden and sizable increase in traffic, either freight or passenger, and that it will take precious time, a large volume of strategic materials and ample manpower to produce enough equipment and supplies to overcome this inadequacy.

As all past experience proves beyond question, the railroads are as vital to national defense as any branch of the military or any implements of warfare. They can handle more freight and passengers with fewer employees and less fuel than any other form of transport. They are almost indestructible and, even after direct attack, can be put back into operation with a minimum of delay. As a Nation, therefore, we cannot afford inadequacy in railroad transportation any more than we can afford inadequacy of armament, trained personnel, planes, missiles, or any of the other implements of defense. And this is the thought, we are sure, which lies behind the timely hearings you are now holding. If so, you must inevitably turn to the question: What can be done about this potentially dangerous situation?

Before attempting to answer this fundamental question, and at the risk of repeating what I am sure will be said by others, I want to endorse the following statement quoted from the June 24 report of the Director of the Office of Civil and Defense Mobilization to the Joint Committee on Defense Production of this Congress:

"Characteristically all forms of transport do not share equally in the increase of traffic which is generated domestically as a result of supporting military operations abroad. Withdrawal of aircraft and oceangoing vessels from the domestic trades is generally necessary. Military requirements for hard goods may force curtailment of automotive production and thus restrain the growth of motor transportation. Military involvement on a large scale, particularly if it is coupled with the loss of foreign petroleum and the diversion of domestic petroleum supplies, may force curtailment of consumption for domestic automotive transportation.

"Any or all of these contingencies will tend to place upon the railroads a burden disproportionate to that currently encountered. Although line and terminal capacities are generally adequate for an expansion of as much as 50 percent in rail traffic, and motive power is believed adequate to handle a larger volume than in any postwar year, freight and passenger train car equipment will experience shortages early in any sharp expansion of rail traffic. The effects of such shortages might be minimized by reinstating a heavier maintenance program for freight cars, by the use of emergency devices for improvement of car service, heavier loading of cars, and faster car turnaround. Nevertheless, it is probably that not all transportation requirements can be met.

"This situation arises from long-term trends over which the mobilization agencies have little, if any, control. The rail share in peacetime traffic has been gradually declining, notwithstanding the wide recognition that railroads would be called upon to participate very heavily in any mobilization situation. The financial condition of the rails has been impaired, and they have been unable to generate capital adequate to keep their plants abreast of technological developments and traffic requirements. Remedies for this situation would appear to lie in corrective long-term transportation policies. The enactment of the Transportation Act of 1958 may mark the beginning of an improvement in the financial position of the railroads. Additional remedies must be discovered and applied to improve the physical capability and efficiency of the railroads. And the carriers themselves must be receptive to proper remedies.

* * * * * * *

"OCDM sees transportation as a vital service to other emergency programs and activities. It is not an end in itself. It provides the means for redistributing the Nation's people and goods in response to social, industrial, and defense conditions

in peace or war. Therefore, we see it as something fluid and ever changing, which cannot be put down and totaled and stored away or held on the side awaiting eventual use.

"Transportation's stature in defense, then, we regard as essentially the same as its stature in current commerce. To the degree that the latter is healthy and responsive to needs, the other will likely be successful in time of serious demands.

* * * * * * *

"Measures designed to improve the long-term financial health of the railroad industry would do more to improve the strength of the mobilization base in this industry than would any measures designed to deal specifically with identifiable physical shortages by financing standby capacity."

No better statement of our case could be made, particularly these sentences I have underlined. Therefore, I would like to devote the remainder of my statement to suggesting "additional remedies * * * to improve the physical capability and efficiency of the railroads," to use the words employed by the OCDM.

The rail carriers will undoubtedly present specific recommendations for your consideration. I assume that they will be designed to restore railroad earning power and thereby enable them to prepare now for their vital role in national defense. It is our hope that you will give serious and favorable consideration to these proposals, especially to two which I am sure will be made and which are of direct and immediate concern to the railway equipment and supply industry. Therefore, we again strongly urge that action be taken as soon as possible to permit the railroads—

(*a*) To set aside funds in construction reserve funds, which amounts to a tax deferral arrangement similar to that in the Merchant Marine Act of 1936; and

(*b*) To write off their investments in locomotives and cars in 15 years and in other facilities in a maximum of 20 years.

As to the first of these proposals, you have available for your study:

1. The testimony recorded during the hearings held in May 1958 by the Subcommittee on Transportation and Communications of the House Committee on Interstate and Foreign Commerce, particularly the statements made by George L. Buland, vice president and general counsel of the Southern Pacific; Daniel P. Loomis, president of the Association of American Railroads; Ernest S. Marsh, president of the Atchison, Topeka & Santa Fe; and my small contribution;

2. The record made on this subject during the course of hearings conducted by the Subcommittee on Surface Transportation of the Senate Committee on Interstate and Foreign Commerce in January of last year, particularly the testimony of Mr. Loomis; James M. Symes, president of the Pennsylvania Railroad; Harry A. DeButts, president of the Southern Railway; and again, my testimony;

3. The statements and testimony you have received, or will receive, in these hearings; and,

4. The report of the Senate subcommittee issued on April 30, 1958, which recommended the creation of construction reserve funds in these words:

"One of the proposals advanced to encourage the replacement of railroad facilities and the necessary modernization of the railroad plant involves the creation of a reserve on which taxes are deferred if deposits in the reserve are used for the purpose stated in the act. Described as a 'construction reserve fund,' the plan is similar in purpose to the relief now provided by the Merchant Marine Act of 1936 to encourage ship construction. The subcommittee recommends that this benefit be likewise extended to all common carriers subject to the Interstate Commerce Act.

"The proposal, which the subcommittee approves, contemplates the creation of a constructive reserve fund on the books of common carriers regulated under the Interstate Commerce Act in accordance with regulations jointly prescribed by the Secretary of the Treasury and the Interstate Commerce Commission. In the computation of its Federal income tax, a deduction would be allowed equal to the amount deposited in the fund, but not to exceed in any one year an amount equal to the depreciation includible under the uniform system of accounts prescribed by the Interstate Commerce Commission. Funds in this account would be limited in their use to the acquisition of equipment or other property used by the common carrier in the transportation business or for the reduction of debt, in whole or in part, which was incurred as an incident of any such acquisition after the passage of the act.

"Amounts deposited in this fund must be used for the purposes intended within 5 years from the date of deposit; if not, any such amount will be taxed, plus

interest, at the rate applicable to the year for which the deduction was taken. In this connection, the proposal contemplates that withdrawals for the purposes intended would be applied against deposits in the order of the deposits.

"The proposal further contemplates that as funds are withdrawn for the purposes intended, there will be a corresponding reduction in the basis of the property so acquired for the purpose of computing depreciation in respect thereof. Withdrawals for the reduction of debt, incurred in connection with acquisitions prescribed by the proposal, would be limited in amount to the adjusted basis of the assets in regard to which the debt is being reduced. Any interest earned by the fund must be retained in the fund.

"In the event funds deposited in the 'construction reserve,' and earnings thereon, are not expended for the purposes prescribed by the act, provision is made for taxing such deposits, with interest, from the date of such deposit, and the collection of such taxes and interest before withdrawal from the 'construction reserve.'

"Recognizing the importance of maintaining the railroad industry, and other common carriers, in a state of operational efficiency and being assured that the transportation industry is unable by reason of its financial condition adequately to maintain, replace, or modernize its facilities and plant, the subcommittee has determined that this proposal is reasonable and appropriate. Taxes, deferred pursuant to this proposal, are not forgiven.

"It is believed that aside from the immediate beneficial effect that will result from this proposal, it will also have a long-range beneficial effect, not only on the operating efficiency of the carriers, but also on our economy. The use of this fund as a means of providing for capital replacement or expansion would also seem to provide a means whereby the level of procurement in this industry would be constant despite the rise and fall in the economy redounding to the benefit of all."

With this wealth of information on the subject, it is unnecessary for me to interpret what has been said and recorded into terms of this subcommittee's special interest—the adequacy of the rail transportation plant in the event of emergency or mobilization. Every statement made in the hearings referred to and in the Senate subcommittee's recommendation and comment thereon, take on added significance when considered in the light of national defense.

In drafting any report as a result of these hearings, therefore, we sincerely urge you to give due weight to the evidence on this proposal now in the available records of congressional hearings and actions.

The second of these proposals dealing with depreciation rates was also the subject of testimony before both the above-named House and Senate bodies last year. Also pertinent to your record is the following quotation from the last year's report of the Senate Surface Transportation Subcommittee:

"The subcommittee also urges that the Senate Finance Committee give favorable consideration to the railroads' proposal that legislation be enacted providing that, at the election of the taxpayer, the maximum useful life of depreciable railroad property may be considered 20 years for tax purposes * * *.

"As it is now, extremely long service lives, ranging in some cases from 50 to 100 years, are assigned to depreciable railway property of the railroads. These long lives attributed to railroad property for tax purposes are wholly unrealistic and constitute a severe handicap. Allowing a 20-year life for depreciable property of railroads would bring about a reasonable increase in depreciation charges on railroad property and would help railroad management to undertake changes in existing property and make such additions and betterments that are necessary to meet the modern competitive situation faced by the railroads."

If we interpret these two proposals in terms of a practical way to assure the adequacy of rail transportation in time of emergency; if we relate them both to the present surplus productive capacity of the railway equipment and supply industry; and if we remember that, in them, is neither subsidy nor tax forgiveness, it is difficult to see any good reason why the railroads and their suppliers should not be given the chance afforded by these two proposals to get busy now on a remedy for any inadequacy that may be uncovered in these hearings.

I submit, gentlemen, that we, as a free Nation, cannot afford to gamble on the adequacy of such a vital element of national defense as rail transportation. We have, at this session of the Congress and through the action of this subcommittee, a priceless opportunity to remedy any inadequacy you may find by providing incentives in the form of changes in the tax law; incentives which will not cost the Government a penny in the long run and which will inevitably result in a more modern, efficient, and adequate railroad plant fully capable of meeting the demands of emergency or mobilization.

Eighteen months ago, I made a statement to a committee of the Congress that I would like to repeat because it applies particularly to this subcommittee and to these hearings. I said:

"We would like to believe that you are not so much concerned with railroads as corporate entities as you are with the effect of this situation on the welfare of our whole economy and our potential for national defense. It this is true, the railroads and we, their suppliers, come before you, not alone as special pleaders, not alone as supplicants for help, but also as loyal Americans devoted to the ideal of a free, competitive system and looking far beyond our interests to the greater good of our people and the preservation of our Nation in a world dark with the threat of nuclear warfare."

So, I say, in conclusion, give us a fighting chance—and by "use" I mean the railroads and their suppliers—to prepare for any national emergency that may come. It may be later than we think, but let us get started on this vital task while we still have surplus capacity; while we still have the materials we need; while we still have the manpower to do the job.

TESTIMONY OF ROBERT CARR

Mr. ROBERT CARR. The first statement we offer is my own. It covers two phases of the contribution we hope to make in these hearings:

1. A report on the results of our survey of the member companies of the institute, made immediately upon receipt of your invitation to participate in these hearings; and

2. Some observations on the railway locomotive situation and the production capacity of the Nation's locomotive builders in the event of emergency or mobilization.

Our survey indicates in general that—

1. Despite the "feast or famine" nature of the railway supply business, and particularly despite one of the worst years we have ever had (1958), our industry is fundamentally sound and in good physical condition;

2. We have plenty of surplus productive capacity now, even with an upturn in the volume of railroad orders this year; and,

3. We could probably double our production with existing facilities if the need arises, providing we do not encounter insurmountable problems of manpower, material supply, and the diversion of our plants to military production.

As to locomotives, my statement reports that—

1. Because of the wholesale replacement of steam with diesel power in the past two decades, the railroads today are equipped to handle a sizable increase in traffic insofar as locomotives are concerned;

2. There is enough surplus production capacity today in existing locomotive building plants to meet any reasonable demand for more power; and,

3. In an emergency, the locomotive builders could turn out a total of about 250 units per month (or 10 units a day) on a 6-day workweek, provided there is 6 months advance notice of the need for this maximum production; that the necessary materials are available in sufficient quantity; and that an additional work force of between 5,000 and 6,500 men can be recruited.

Analyzing the responses to our inquiry, the suppliers of freight car component parts indicate that existing capacity can support a 10,000-car-per-month program.

Makers of track maintenance equipment indicate that production can be very greatly expanded.

Signal manufacturers report a substantial margin, enabling them to increase production up to 100 percent.

Suppliers of ties and timber products report ample facilities, provided sufficient lead time (60 days) is given.

In the case of steel castings, car-body components, track materials, brakeshoes, and ties and timber products, all replies indicate the adequacy of present production facilities to meet the demands of an emergency comparable to World War II or Korea. Pertinent to this situation is the necessity of having assurance that the industries' facilities will not be diverted to production of other defense materials in large amounts.

However, I point out in my statement that many railway supply companies have embarked upon programs of diversification, some of which are well advanced at this time. This trend, which is a direct result of the feast or famine nature of railway purchases, if continued, will eventually endanger the mobilization support which the industry can provide for the railroads.

"But," I explain, "the railroads are not entirely responsible for this condition. Under present conditions, they are unable to set aside funds for regularized programs of expansion and improvement, nor can they realistically amortize the equipment and facilities they do purchase."

Our reports indicate that manpower is available for expansion in most areas of the industry at present.

Regarding manpower in time of emergency, our reports express serious doubt as to the ability of some segments of the railway supply industry to secure an adequate working force. The harvesting of timber is one of these segments. Skilled trades for foundry products are not now being trained for more than present needs; thus, in time of emergency, accelerated training would permit manning increased output, but only at a sacrifice of efficiency and economy. Electronic and signal manufacturers anticipate a shortage of professional men and skilled workmen in an emergency. Other segments of the railway equipment and supply industry report that they expect a repeat of the manpower shortages of World War II, which may be partly overcome by careful planning based on past experience. If done successfully, this should permit them to meet emergency manpower needs.

Regarding materials, all segments of our industry express concern over an adequate emergency supply. The current accelerated production program has again shown that there is not sufficient heavy steel-plate production. This could become a significant bottleneck when, in time of mobilization, heavy carbuilding and repair work must compete for steel with shipbuilding, tanks, and armament. Bearing manufacturers indicate that material supply would not be a difficulty, provided there is no interference with the orderly return of scrapped bearings from the railroads on a conversion basis. Signal and electronics manufacturers contemplate shortages in copper, 2.5-percent silicon steel, platinum, nickel, zinc, tin, lead, and other strategic materials.

All manufacturers except a controlled material plan to be put into effect during an emergency. In this regard, our industry now has a Railway Supply Industry Advisory Committee under the auspices of the BDSA. Inasmuch as this Industry Advisory Committee has been organized for almost a year and can be activated quickly in case of mobilization, the industry should be in a position to plan material

allocation and mobilization production with a minimum of delay and confusion.

Insofar as susceptibility to damage and restoration in the case of destruction, our replies would indicate that, so far, little evaluation has been given to plant dispersal or other means of coping with such contingencies.

Similarly, in our survey there is no indication of stockpiling, other than that incident to normal commercial needs; and apparently none is contemplated for emergency. In fact, the railroads today seem to feel that they must carry considerably less inventory and they have greatly curtailed the stockpiling of parts and materials. Thus, it is anticipated that, at the outset of mobilization, some shortages will occur. Again, it is well to emphasize that this situation is due, not to lack of need by the railroads, but to lack of funds.

In this connection, one problem has been brought to our attention by the signal manufacturers. In view of the fact that the number of manufacturers capable of producing complete signal systems is limited, and considering that electronic materials can be expected to be in critical supply in an emergency, it might be desirable to stock certain selected supplies at strategic points.

Control towers are the nerve centers of railway traffic movement and are vulnerable to damage from attack or sabotage. Destroying, or even damaging such centers would immediately hamper railroad operations throughout a wide area. Therefore, while signal manufacturers report that in 180 days and with proper authorizations, they can double the normal production of service parts, the danger of slowing down rail traffic due to the damage or failure of a "nerve center" gives good cause for considering the strategic stockpiling of signal materials and readily substituted complete control units. Such a program could only be undertaken by the Government.

The major emphasis in all of the replies we have received is placed on a buildup of the railway plant now. Only a modern, healthy railroad industry has the capacity to expand in the explosive fashion which an emergency demands. Railroads have a vast inherent elasticity, but in order to provide the necessary reserves of equipment, capital facilities, and manpower to expand rapidly, they must be able to conduct their peacetime business in an atmosphere of profitable and sustained progress. This is not the case today and this situation is primarily due to conditions which I am sure will be covered in detail during the course of these hearings.

The second statement we wish to submit is that of John W. Scallan, vice chairman of the institute and president of Pullman-Standard, a division of Pullman, Inc., of Chicago.

Mr. Scallan's contribution deals with the freight and passenger car situation—a key element of the problem you are considering here. The highlights of his statement include these conclusions:

The physical capacity of the Nation's commercial freight car-building plants (as distinguished from railroad-owned car-building shops) is now more than adequate to supply the railroads' annual new car requirements.

The maximum capacity of the freight-car builders is about 115,000 cars per year, providing materials and manpower are available, some standardization of design is achieved, there is no diversion to other war production, capital equipment worn out by the strain of maxi-

mum production can be replaced, and a 6-day workweek is possible.

In his explanation, Mr. Scallan points out that:

> Historically, there has never been a time when the carbuilders were not in a position to fill the demand for new cars when materials and orders were in balance. In the periods of heavy car buying, the only limiting factor in the industry's production has been a shortage of materials, for abnormal car ordering programs have generally coincided with periods of great economic activity and high national production levels.
>
> Rather than a capacity to produce, the carbuilders' fundamental problem has been one of the inability of the railroads to order cars on a more uniform, year-to-year basis.

Mr. Scallan estimates that a new freight car-building plant with two erection tracts and a 50-car-a-day output would cost $24 to $30 million; would require 18 to 24 months to construct; and, would use approximately 300,000 tons of steel per year. However, this is largely academic, he points out, because in the event of war there would not be sufficient time nor materials to erect new plants nor enough supplies of steel and machine tools to equip them.

As for building passenger cars, most of the productive capacity of the country is, and has been for some time, on what is practically a standby basis. He points out that there is now adequate capacity for any foreseeable demand but he adds—

> unless passenger car orders are forthcoming promptly, most of this productive capacity will be lost forever because the industry cannot afford to keep these costly facilities idle on a standby basis.

In support of this statement, he points out that the number of passenger-carrying cars built for the railroads during the past 5 years averaged only 197 cars per year—while the passenger car fleet of the railroads was decreasing from 26,000 cars to 21,000 cars. No sleeping cars have been built since February of last year when two were delivered. Only one was built in 1957. Productive capacity and skilled manpower are declining because of nonuse, he concludes, although theoretically the five remaining passenger car-building plants could turn out from 750 to 1,000 cars a year—if the necessary competent manpower and materials could be obtained.

The third statement we offer is that of C. E. Grigsby, chairman of the institute's member committee on emergency planning and vice president and general manager, transportation equipment division, American Steel Foundries, with headquarters in Chicago. American Steel Foundries has 24 plants located in 16 States.

Mr. Grigsby's statement deals with the production situation of what are called component parts—the five categories of parts which go into the railroad freight car; that is, truck assemblies; brake rigging and airbrakes; draft gears and couplers; underframes; and car bodies. In this connection, he says:

> The construction of freight cars is largely dependent upon the assembly of component parts processed or fabricated by many suppliers. No single shop is tooled or equipped to produce all of the parts required to build a complete freight car. so, for any emergency car-building program, each of these many suppliers is equally dependent upon material, manpower, and all the factors that will enable him to meet car-building schedules.

His statement points to many problems in this field of diverse manufacturing but he expresses confidence that the component manufacturers would encounter little difficulty in keeping up with any needed car construction program.

Regarding actual expansion of facilities—

he continues—

while the potential exists, it is difficult for management to think in terms of expansion in the face of the industry s surplus capacity and unless car-building facilities in excess of those existing today come into being. The performance of our industry in World War II and during the Korean crisis established the adequacy of facilities to cope fully with such emergencies. Should unprecedented demands dictate enlarged facilities, a survey of a large segment of our industry indicates that a 10- to 15-percent increase above our present maximum capacity could be accomplished within the limits of present plant locations. Such an expansion could be attained only at a very substantial cost and, considering the difficulty of securing manufacturing facilities, men, and materials in times of duress, would require at least a year's time to accomplish.

One of the major points in Mr. Grigsby's statement has to do with the demand, in time of emergency, on the facilities of the component parts manufacturers for the production of military ordnance.

In his conclusion, therefore, Mr. Grigsby suggests that:

Plans might be made to appoint a joint committee from railroad, military, and railway equipment sources to consider freight car construction as a preparedness measure. The need for cross-checking among military ordnance, military transportation, and civilian railway needs is already apparent. Such a committee might well be able to resolve this problem to the end that the suppliers will have a better knowledge of their mobilization demands and thus effect more accurate mobilization scheduling and programing. Such a committee could also plan and devise in advance the standardized principles of car construction advisable during emergency periods; this would result in maximum conservation of highly critical materials.

Mentioning the Institute, its committee on emergency planning and the Railway Supply Industry Advisory Committee of the BDSA, Mr. Grigsby concludes that "our industry is better organized than it ever has been to meet emergency situations."

Material supply and manpower are not serious problems now, he states, but both could be in the event of an emergency. However, he expresses the opinion that—

with our considerable technological improvement and our previous experience in importing labor * * * manpower would not be an insurmountable hurdle.

As for material supply he adds—

We are hopeful that the new defense materials system will recognize transportation as an absolutely basic and vital key to mobilization plans and offer a real improvement based on our experience in World War II and Korea.

Classifying the items used in freight car construction, Mr. Grigsby concludes:

Basic steel, and particularly rolled steel plates, with its high proportionate use in every freight car, becomes the most critical item and should receive the greatest amount of attention in the scheduling of railroad mobilization production.

Two other recommendations are made by Mr. Grigsby:

As an emergency measure only, because of the strategic need for other vital purposes of those facilities normally devoted to the production of rolled steel wheels, as experienced in World War II, consideration might be given to the standby maintenance of some of the cast iron wheel facilities which are now fast being discarded as obsolete.

In consideration of materials allocation for emergency, some weight should be given to the preservation of the existing system of orderly return by the railroads to the manufacturers of scrapped bearings on the conversion basis.

The fourth and condluding statement I would like to submit is that of R. Arthur Williams, chairman of the institute in 1957 and 1958 and president of the Standard Railway Equipment Manufacturing Co. of Chicago and Hammond, Ind.

In the hearings leading to passage of the Transportation Act of 1958, Mr. Williams testified on behalf of the institute before the Subcommittee on Transportation and Communications of the House Interstate and Foreign Commerce Committee and the Surface Transportation Subcommittee of the Senate Committee on Interstate and Foreign Commerce—in both cases making specific recommendations for the consideration of these two groups. Because it is so vital to our contribution to the record of these hearings, I would like to summarize part of Mr. Williams' statement. Perhaps assurances of some expansion potential and declarations of good intentions in the event of emergency or mobilization are enough for the present purposes of the subcommittee. But we believe that your inquiry is motivated by a desire to do more than merely assess the adequacy of our nation's transportation facilities. We believe that your deeper concern is to uncover and explore ways and means by which transportation adequacy can be reasonably assured when E-day or M-day comes. We believe that you would complete these hearings with great satisfaction if the railroads could demonstrate that they are prepared now to handle the peakloads of national defense and the civilian needs of our country—and we could tell you that we have the capacity to supply all the additional locomotives, cars, and other facilities that may be required. In this case, you could report with confidence that one vital arm of national defense, rail transportation, is truly ready to meet any foreseeable need.

But, frankly, gentlemen, this is impossible, in our opinion; we do not know when the day of emergency or mobilization will come. We do not know what the subsequent demands for material or manpower or arms production will be. And we have only a hazy idea of the total size of the transport load which will have to be carried to support national defense and our civilian economy.

All we can surmise is that our rail transportation plant is not now prepared to handle a sudden and sizable increase in traffice, either freight or passenger, and that it will take precious time, a large volume of strategic materials and ample manpower to produce enough equipment and supplies to overcome this inadequacy.

As all past experience proves beyond question, the railroads are as vital to national defense as any branch of the military or any implements of warfare. They can handle more freight and passengers with fewer employees and less fuel than any other form of transport. They are almost indestructible and, even after direct attack, can be put back into operation with a minimum of delay. As a nation, therefore, we cannot afford inadequacy in railroad transportation any more than we can afford inadequacy of armament, trained personnel, planes, missiles, or any of the other implements of defense. And this is the thought, we are sure, which lies behind the timely hearings you are now holding. If so, you must inevitably turn to the question: What can be done about this potentially dangerous situation?

Quoting at length from Progress Report No. 43 made on June 24 of this year by the Director of the Office of Civil and Defense Mobili-

zation to the Joint Committee on Defense Production of this Congress, Mr. Williams underlined two conclusions therein: They are—

> Remedies for this situation—rail inadequacy in times of emergency—would appear to lie in corrective long-term transportation policies. The enactment of the Transportation Act of 1958 may mark the beginning of an improvement in the financial position of the railroads. Additional remedies must be discovered and applied to improve the physical capability and efficience of the railroads.
>
> Measures designed to improve the long-term financial health of the railroad industry would do more to improve the strength of the mobilization base in this industry than would any measures designed to deal specifically with identifiable physical shortages by financing standby capacity.

No better statement of our case could be made—

Mr. Williams continued.

Suggesting "additional remedies * * * to improve the physical capability and efficiency of the railroads," Mr. Williams repeats the recommendations he made to both the House and Senate last year; namely, that—

1. Railroads be permitted to set aside money in construction reserve funds, which amounts to a tax deferral arrangement similar to that in the Merchant Marine Act of 1936; and
2. Railroads be permitted to write off their investments in locomotives, cars, and other facilities in more realistic and shorter periods of time.

If we interpret these two proposals in terms of a practical way to assure the adequacy of rail transportation in time of emergency; if we relate them both to the present surplus productive capacity of the railway equipment and supply industry; and if we remember that in them is neither subsidy nor tax forgiveness, it is difficult to see any good reason why the railroads and their suppliers should not be given the chance afforded by these two proposals to get busy now on a remedy for any inadequacy that may be uncovered in these hearings.

I submit, gentlemen, that we, as a free nation, cannot afford to gamble on the adequacy of such a vital element of national defense as rail transportation. We have at this session of the Congress a priceless opportunity to remedy any inadequacy you may find by providing incentives in the form of changes in the tax law, incentives which will not cost the Government a penny in the long run and which will inevitably result in a more modern, efficient, and adequate railroad plant, fully capable of meeting the demands of emergency or mobilization.

So I say in conclusion, give us a fighting chance—and by "us" I mean the railroads and their suppliers—to prepare for any national emergency that may come. It may be later than we think, but let's get started on this vital task while we still have surplus capacity, while we still have the materials we need, while we still have the manpower to do the job.

That concludes our presentation, Mr. Chairman and gentlemen. We hope that we have been helpful.

Mr. KILDAY. Thank you, Mr. Carr. We appreciate particularly your statement and especially your assembling the other statements in the very efficient manner in which you have summarized them for us here.

Your statement will be very helpful to us. We will meet then in this room at 10 o'clock tomorrow. The committee stands adjourned.

(At 12 noon the committee adjourned until 10 a.m., July 31, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

FRIDAY, JULY 31, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10:05 a.m., Hon. Paul J. Kilday (chairman of the subcommittee) presiding.

Mr. KILDAY. The committee will be in order.

We will continue our hearing this morning on the adequacy of transportation in the event of mobilization.

Our first witness is Mr. Daniel Loomis, president of the Association of American Railroads.

Would you have a seat, Mr. Loomis?

I meant to recognize Mr. Sandweg to place some statements in the record.

Mr. SANDWEG. Mr. Chairman, I have for the record a statement of the National Association of Motor Bus Operators and the National Defense Transportation Association. Each of them has asked their statements be placed in the record.

Mr. KILDAY. Without objection, they will be included in the record.

(The statements referred to are as follows:)

STATEMENT OF NATIONAL ASSOCIATION OF MOTOR BUS OPERATORS

The National Association of Motor Bus Operators is the national trade association for the intercity bus industry. It serves as spokesman for companies who provide an estimated 75 to 80 percent of the volume of such service. These carriers transport passengers by motor bus to, from and between virtually all communities in the nation over an estimated 250,000 miles of highway. They also provide package-express and first-class pouch-mail services.

In order to provide the subcommittee with information on motor-bus operations and facilities in general, the data herein are not confined to those relative to the intercity-bus industry. Instead, we shall include certain information on other phases of street and highway passenger transport such as local-transit and school-bus operations.

To the extent the information is available to us it is arranged in the order of the topics listed in the discussion outline prepared for the use of the subcommittee and witnesses. Some of these items will, however, be omitted or treated briefly because of the fact that certain classified materials relative to mobilization assumptions are not available to us at this time. As soon as this information is made available, we shall be glad to prepare a supplementary statement along such lines as the subcommittee may wish.

A. PRESENT STATUS OF SYSTEMS AND FACILITIES

According to a 1957 study made by the Bureau of Public Roads (Third Progress Report of the Highway Cost Allocation Study, House Document No. 91, 86th Cong., 1st sess.), there were 256,625 buses in the United States. Distributions

of these vehicles by type, weight class, and geographic divisions are shown in tables 1 and 3 of the report on that study. Approximately a third (77,404) of these vehicles are operated by common carriers either in intercity service (19,259 buses) or local mass transportation service (58,145 buses). More than 80 percent of the remaining 179,221 vehicles are schoolbuses operated by public school districts, private schools, or under contract. Bus registrations increased by about 2 percent between 1957 and 1958 principally as a result of additions to the school-bus fleet. Annual purchases of common-carrier buses over the past several years have averaged little more than 5 percent of the total, partly as a result of a trend toward the use of larger vehicles but primarily because of declining patronage, a trend which has persisted fairly continuously since the end of World War II. Most of the vehicles were purchased as replacements and not as additions to the total fleet.

Since nearly three-fifths of the Nation's total bus fleet consists of schoolbuses operated in the main at public expense, the question of economic condition is pertinent, for the most part, only with respect to the approximately 77,000 vehicles operated by common carriers.

Both segments of the common-carrier bus industry have been faced with serious financial problems over the last dozen years, as the combined result of declining patronage and greatly increased by nearly 75 percent. The traffic on intercity bus lines, as measured by passenger miles, has declined about one-fourth since 1946 while, at the same time, expenses per vehicle mile have risen by 50 percent.

The decline in patronage experienced by the motor common carriers of passengers is principally the result of the phenomenal increase in the use of automobiles in recent years. Registrations of passenger cars have increased from a little over 28 million in 1946 to about 57 million in 1958, or 110 percent. In intercity transportation, estimates based on Interstate Commerce Commission figures show that more than 88 percent of all intercity passenger miles consist of travel by private automobile. The remaining 12 percent is about equally divided among buses, the railroads and the airlines. The situation is somewhat different in terms of passengers carried. The best estimates available indicate that intercity buses transported 450 million passengers during 1958 as compared with less than 400 million for the railroads and about 45 million for the airlines.

The importance of intercity and suburban bus service as an essential part of the national transport system was recently illustrated by developments following abandonment on June 30, 1959 of rail passenger service on the Old Colony Division of the New York, New Haven & Hartford RR. News reports indicate that about 9,500 daily commuters were affected by this abandonment and that nearly half of them are now traveling between their homes and downtown Boston by bus. As further curtailment of rail passenger services is found necessary, added dependence on motor buses appears inevitable.

As to physical facilities, the terminals and garages maintained by the bus industry appear to be generally adequate, and substantial improvements have been made in recent years. The vehicles, which constitute by far the most important industry facility, have not been replaced at the rate which would have occurred in the absence of the declines in patronage already noted. It follows, therefore, that the average age of the fleet, as noted below, is somewhat above the figure which would have been expected otherwise.

B. EFFECT OF GOVERNMENT REGULATIONS

The expanded Federal highway program will, of course, be of benefit to intercity bus carriers by facilitating faster schedules over longer, through routes. On the other hand, the accompanying tax load, when coupled with the taxes levied by the States and municipalities has imposed very serious burdens on the carriers as pointed out below. The highway program is of comparatively little benefit to the local-transit industry since most of its mileage is operated over city and suburban streets.

The intercity common carriers have been handicapped somewhat by State regulations limiting the width of buses (outside certain urgan areas) to 96 inches. This limitation is also applicable to the Interstate Highway System under the 1956 Federal Aid Highway Act. The widths of the lanes on most of the highways used by intercity carriers are entirely adequate to permit operation of a wider bus which would be a safer as well as a more comfortable vehicle.

As suggested above, the economic position of a great many carriers, both intercity and local, is precarious, and an extremely important element in this situation is the heavy tax burden imposed at all levels of government. There are no systematic nationwide data on bus company failures, but the results of a recent

study in New York State is probably representative. It was found that, between 1951 and 1958, a total of 73 communities were deprived of all or a major part of their bus service as a result of a net loss of 103 carriers (nearly half the total in the State) providing such service. The necessity for preserving these essential services convinced the State legislature that immediate tax relief measures were essential. The legislature thereupon repealed the tax of 2 percent on the gross revenues of common carriers by bus and exempted them from the 1959 increase of 50 percent in the State tax on motor fuel. Some form of tax relief was extended to the carriers in at least six other States and in numerous municipalities.

The problem, however, still remains a serious one in many areas and is primarily the result of three general sets of facts. Many municipalities still levy a so-called franchise tax on the carriers. This device originated many years ago when streetcar operations were widespread and, to a considerable extent, constituted a monopoly for which a fee was considered proper. Bus operations, however, no longer constitute anything resembling a monopoly as a result of competition with other forms of transportation with private automobiles and taxicabs in local transit, and, in intercity service, with automobiles, the railroads, and the airlines.

The general structure of State taxes assessed against bus operators constitutes a confused mass of duplicating and discriminatory levies. Vehicle registration fees and fuel taxes at reasonable levels clearly constitute proper charges for the use of the public highways, but at least two-thirds of the States impose one or more of a wide variety of so-called third-structure taxes such as those based on vehicle-miles, seat-miles, passenger-miles, and gross receipts.

Further, substantial proportions of the revenues from these levies, many of which are applicable only to the common-carrier bus industry which is already overburdened, are deposited in general funds and used for education, welfare, and other nonhighway purposes.

Interstate operators are also subject to duplicating registration fees and fuel taxes assessed by two or more of the States through which their vehicles travel. Some intercity buses are required to carry registration plates for as many as a dozen States, all paid for at full rates despite the fact that any one vehicle travels a relatively small proportion of its total mileage over the highways of any one of the States. Some progress in dealing with this problem has been made in about half the States, which permit operators to pay registration fees in proportion to the percentage of the carriers' total mileage that is operated within the taxing State.

A similar situation prevails with respect to State motor-fuel-taxes. In some States the fuel tax is on a sales basis; that is, the tax is paid on all fuel purchased irrespective of where it is used. In other States a tax is levied on all fuel used irrespective of where it was purchased. It follows, therefore, that fuel purchased in a "sales-tax" State and consumed in one or more "use-tax" States is subject to two or more levies. There is urgent need for adoption by all the States of uniform fuel-use tax statutes, now in effect in about a third of the States, under which the tax is paid only on the fuel consumed within the State.

This entire problem of State levies on interstate enterprises is now being studied by the Senate Committee on Finance under Senate Joint Resolution 113 and related proposals. The subcommittee will undoubtedly find the testimony presented to that committee useful in its deliberations and particular reference is made to the statement offered by Paul F. Mickey on behalf of this association.

C. CAPABILITY FOR EXPANSION IN THE EVENT OF MOBILIZATION

The comments under this heading are based on a mobilization situation that does not involve a nuclear attack upon the continental United States.

In the case of intercity bus operations, it is estimated that the current annual total of approximately 1.22 billion vehicle miles could be increased only to about 1.25 billion miles. On the other hand, the potential increase in available passenger miles of transportation is considerably greater by virtue of the fact that the load factor (passenger miles as a percentage of seat miles) is currently little more than 50 percent. The maximum practicable load factor as based upon experience during World War II is 75 to 80 percent. It follows, therefore, that, in the event of mobilization, the intercity bus industry could supply well in excess of 35 billion passenger miles of intercity transportation as compared with the current level of about 25 billion.

On the basis of data at hand, an estimate of the potential of local bus operations is somewhat difficult, but it appears that an increase from the present traffic level of about 5.5 billion passengers annually to approximately 9 billion could be anticipated.

The foregoing estimates do not contemplate any additions to current fleets of common, carrier vehicles either by purchases of additional equipment or by the transfer of other vehicles (school buses, for example) to common-carrier service.

These estimated potentials could not be achieved without taking into account certain other essentials. For example, there would have to be some temporary modification of certain regulations of the Interstate Commerce Commission relative to pooling of operating authorities. Even more important, however, would be avoidance of certain restrictions imposed during World War II which detracted markedly from the efficiency of intercity bus operations. The 35-mile speed limit was especially serious. While this limitation might result in economies in fuel and rubber in the case of passenger cars, it had the opposite effect in the case of intercity buses. The average auromobile can operate in high gears at speeds of 20 miles per hour or less, but because buses are engineered to operate with maximum fuel economy, they cannot be shifted into cruising gear under about 35 miles per hour. This means that, under the 35-mile limit, vehicles were operating most of the time at considerably less than maximum efficiency. Not only were savings in fuel impossible, but the result was greater wear on engines, transmissions, and tires. Actual tests showed that an increase of 5 miles per hour in the limit would have decreased tire consumption on buses by almost 5 percent.

Another result of this regulation was an increase of almost a fourth in the number of drivers required—an extremely serious problem in a period of manpower shortages. On certain local-transit routes the use of women drivers is feasible but it is impracticable in the case of most over-the-road operations. Extremely careful consideration must be given to these and related regulations if the bus industry is to be prepared for a mobilization emergency.

It must also be noted that, although the potentials suggested above do not assume any additions to the total fleet, replacements would be necessary fairly early in any protracted mobilization period. The average age of the approximately 12,000 buses operated by class I intercity carriers subject to the jurisdiction of the Interstate Commerce Commission is about 6½ years. While data for the smaller intercity carriers are not available, it is certain that their average age is considerably higher. The same is probably true for the local transit fleet.

The estimated potential of the intercity bus industry suggested above would require an annual average per vehicle in excess of 60,000 miles. While this is somewhat below the current average for the class I carriers, the buses operated by them are, in the main, newer than those operated by the smaller carriers who would be faced almost immediately with maintenance and replacement problems if they were to increase their annual mileages significantly.

Although the present intercity fleet is probably in better condition than it was in 1941, it is significant that new buses amounting to nearly a third of the fleet were required when the United States became involved in World War II. A significant proportion of these new vehicles were for replacement rather than additions to the fleet. The situation with respect to the local transit fleet was essentially similar. Without taking any account of possible losses resulting from enemy attack, provision should be made for an annual production of buses not less than 10 percent of the existing fleet.

D. MOBILIZATION PLANS AND POLICIES

The detailed plans and policies being developed by the Office of Civil and Defense Mobilization and the Department of Defense are not available to us at this time. Representatives of the industry are, however, serving as members of the Executive Reserve. The military traffic management agency in the Department of Defense has requested this association to evaluate the capability of the industry to meet the needs for military transport as projected on the basis of certain mobilization assumptions. That study will be initiated as soon as the data on projected requirements are available to us.

E. ADVANCE PLANNING

Although there are no specific mobilization plans in effect within the industry, it should be noted that most of the carriers, particularly those operating substantial numbers of vehicles, have modern garage and repair facilities for maintenance of their equipment. Some of these shops are organized on a line-production basis which makes major overhauls possible with a minimum of time during which a bus is out of service. In addition, the carriers have systematic and well-organized preventive maintenance programs designed to keep the equipment in good mechanical condition and to avoid road failures.

G. ROLE OF INDIVIDUAL MODES OF TRANSPORTATION

During World War II the railroads supplied about three-fourths of the total intercity passenger miles of travel by public carrier. Most of the remaining fourth was furnished by the intercity buslines. In another period of mobilization under somewhat similar conditions, it appears reasonable to assume that about the same distribution by type of carrier would obtain. While it is true that, at the present time, the airlines provide somewhat more than a third of the total volume of such travel, it is likely that, in the event of an emergency, the equipment of the airlines would be largely devoted to military use. As already noted, it is our judgment that the bus industry could handle the essential traffic at the outset, but that equipment replacements and maintenance personnel and material would have to be stepped up rather promptly.

Sometimes overlooked is the importance of intercity buses in supplying the transportation requirements of the armed services. It is estimated, for example, that in 1944, nearly a fourth of the intercity bus traffic consisted of military movements, other travel on Government requests, furlough travel, and the movement of selectees to and from induction centers. Intercity buses handled an estimated 90 to 95 percent of the last-named traffic.

Within hours of the attack on Pearl Harbor, the carriers on the west coast assembled over 500 buses for the transport of military personnel to mobilization centers and action posts. The entire 43d Division, with impedimenta, was moved by bus from Camp Pickett Va. directly to shipside at Hampton Roads, a movement extremely efficient because of the lack of need for transferring the men from one type of vehicle to another. Only a little over a year ago, three intercity carriers cooperated in the movement of 3,700 marines a distance of 224 miles from Camp Lejeune, N.C., to Norfolk, Va. This movement was accomplished over a period about 7 hours less than would have been required for rail transportation and at a cost at least 50 percent lower.

During 1958 an estimated 65 percent of the personnel of all National Guard units were moved by intercity bus to and from military installations in connection with their annual 2-week training periods.

Movements of this type are arranged with a high degree of efficiency because of the customary arrangements under which two or more carriers supply portions of the required equipment. The machinery for such cooperative action already exists by virtue of the fact that many of the carriers operate so-called pooled service whereby long-distance passengers may travel over the certificated routes of several carriers witnout the necessity for changing buses.

In the event of a nuclear attack upon the continental United States, the situation would undoubtedly be vastly different. Railroad yards would certainly experience substantial damage by blast or berendered useless by fallout. Any such contingency would throw a tremendous additional load on motor vehicles of all types, primarily because of their ability to use alternate routes avoiding damaged or contaminated highways. All but the largest buses are capable of traveling on roads which are passable for passenger automobiles.

As emphasized repeatedly by the Office of Civil Defense Mobilization, local organization would be of paramount importance in such a situation. It is here that buses would play an extremely important role. The local-transit vehicles are distributed throughout the country and the equipment in each locality is under the immediate control of a few individuals. In the case of intercity buses, even those operated by large interstate carriers, there is a substantial degree of local control through regional managers, district supervisors, and dispatchers. Assuming a reasonable degree of advance planning, which has to be accomplished, mobilization for essential transportation, evacuation of the wounded, transport of medical supplies, and similar tasks should be relatively effective. The 150,000-odd school buses, which are also subject to local control, would be a major factor. While passenger automobiles would undoubtedly play a major role, the problem of organization would obviously be more difficult.

H. SUSCEPTIBILITY TO DAMAGE AND DESTRUCTION

As pointed out by the Office of Civil and Defense Administration, the distribution and magnitude of a possible nuclear attack cannot be predicted. Assuming, however, that any attack would be directed at the larger metropolitan centers, some rough evaluation may be suggested. The loss by damage, destruction, or contamination would clearly be heaviest in the case of local transit equipment since a very large proportion of it is concentrated in large metropolitan centers and, in general, does not travel far from the more congested areas. Further, an

additional load would be thrown on motor vehicles as the result of destruction of or damage to rapid transit and rail commutation facilities.

There would be less serious losses in the case of intercity buses; while considerable numbers of these vehicles would be at terminals or in garages in metropolitan centers, many more (depending upon the time of day, day of the week, and season) would be on open highways. Losses in the case of schoolbuses would be substantially lower since more of them are located in rural or suburban areas.

At this time we are aware of no stockpiling activities in the bus industry.

PREPARED STATEMENT OF MR. SAMUEL D. SCHNELL OF THE NATIONAL DEFENSE TRANSPORTATION ASSOCIATION

Mr. Chairman and members of the committee, the National Defense Transportation Association appreciates the invitation of the committee to present these views before the committee on such important subjects as those now before the committee relating to the adequacies of transportation systems in support of the national defense effort in the event of mobilization. Our membership will follow the progress of these hearings with intense interest. Our association offers its cooperation to the committee to such extent as is possible.

We are fully in accord with the purposes and objectives of this committee as covered in your outline reflecting the general scope of the study the committee is to conduct pursuant to H. Res. 19 and a citation of the purposes and objectives of this association shows how clearly there is complete harmony. Our purposes and objectives are:

"To uphold and defend the Constitution of the United States of America and the principles for which it stands.

"To secure the national defense.

"To sponsor and encourage the promotion and progressive development of scientific and practical improvements in all forms and phases of transportation and related communications, especially as to all military and defense requirements.

"To promote cooperation between the various segments of transportation and allied industries; including rail; water; highway; air; warehousing, moving and storage; freight forwarding; petroleum; financing; suppliers; packaging, and others.

"To facilitate close cooperation and integration of the national civilian transportation system with national defense requirements, plans and usage.

"To study and consider objectively all preparedness plans for full and efficient utilization of civilian manpower and facilities in national and local needs in military and other emergency requirements, and furnish aid and assistance whenever and wherever required.

"To conduct appropriate and pertinent studies and educational programs designed to increase knowledge of transportation requirements and stimulate improvements to increase transportation efficiency and effectiveness of personnel and facilities in private industry and military utilization.

"To encourage programs of transportation research and development, particularly among private, industrial, educational and research organizations in cooperation with the research agencies of the Department of Defense and other governmental organizations.

"To collect and appropriately disseminate useful knowledge and information with respect to military and civilian transportation and related subjects pertaining to all phases of transportation as they may affect requirements during emergencies and national defense.

"To foster a spirit of patriotic good will and cooperative endeavor and mutual understanding among its members, industry, the Armed Forces, and all governmental agencies concerned with transportation.

"To maintain an awareness among its members and the public of the paramount importance of transportation in national defense.

"To foster nationwide assurance within the disaster relief agencies of the American Red Cross, Civil Defense, and similar organizations that transportation management, personnel, and facilities stand ready for prompt and effective collaboration upon call for action and united efforts."

The National Defense Transportation Association is a national nonprofit association, and its membership of approximately 12,000 is representative of all segments of private transportation and allied industries, and of Government departments and agencies concerned with transportation, including the Department of Defense, the Army, the Navy, and the Air Force, all joined in active participation membership in the association in the mutual interest all have in transportation, preparedness, and national defense.

Individually, many of the association members are outstanding leaders and authorities. Collectively, our association seeks the combined advantages of the concert of thought and action on mutual problems for the public benefit. Our aim primarily is to stress among our members and to the public the great national and local importance of transportation, modernization, and economic efficiency as a paramount necessity for national defense and logistic support of the Government and the Armed Forces in mobilization and actual warfare, as well as in peacetime disasters of all types. Nationally, we espouse these precepts; locally, we aim to organize the members of the transportation industry and the Armed Forces to closely cooperate and have ready and alert special committees whose members are available to assist the local authorities, the Red Cross, the Civil and Defense Mobilization Directors in respect to the numerous transportation requirements as are found to be necessary by the various situations as they arise.

The National Defense Transportation Association is not vested with any statutory authority for direct action, hence, it directs its efforts toward full cooperation and assistance with those who do have such authority as may be exercised.

This association endeavors to act as a focal point for the leaders in all segments of the transportation fields of industry, Government and the Armed Forces, and as a forum for the discussions and expressions of views on the needs of the transportation industry, the development of progressive action and potentials, and the relation thereof to the requirements of our Armed Forces in logistic support in defense and warfare. The records of the hearings of this committee will be made primary considerations of our study groups.

While our association does not have statutory authority to effectuate our findings and conclusions, the publication of them is found to be of considerable concern and value to all who participate and receive our forum proceedings. As illustrative of these proceedings, I hand to the committee a volume containing the principal addresses delivered at our annual convention and forum held in St. Louis, Mo., November 9–12, 1958, which may be of interest and assistance to the committee, because many of these addresses approach the areas of exploration with which the committee's outline of inquiries indicates it will be interested. The theme of our St. Louis forum was "Is transportation now in battle array?" A similar forum will be held in Seattle, Wash., this next October. Through these discussions of transportation in relation to national defense we aim to highlight conditions as they exist and point the way to progressive improvements. We can get only voluntary self-analysis and the inspiration of these cooperative efforts. The stature of the participants and their dissertations based upon expert experience are believed to be profoundly effective. We believe the committee seeks similar disclosures. We support the committee in its inquiries.

We believe it is recognized that the United States has the greatest transportation system ever developed anywhere in the world and at any time in history. We are fully aware of the continuous technological and scientific advances and improvements being made through discovery and adaptation. We are also aware of many of our present deficiencies and we firmly believe that thorough inquiries and disclosures will lead to effective and remedial changes. While the association is limited in its capacity to offer critical testimony in the areas of the committee's inquiries, we will gladly assist the committee and its staff in obtaining the experienced testimony of our members, if we can be of further aid to the committee. We will watch with interest the progress of the hearings.

Mr. KILDAY. We will be glad to have your statement, Mr. Loomis. You may proceed as you desire.

STATEMENT OF DANIEL P. LOOMIS, PRESIDENT, ASSOCIATION OF AMERICAN RAILROADS

Mr. LOOMIS. I have filed with the committee a written statement, and will try to make the oral statement somewhat briefer.

My name is Daniel P. Loomis. I am president of the Association of American Railroads, with headquarters at Washington, D.C.

The Association of American Railroads is a voluntary nonprofit organization. Its membership comprises railroads that operate more than 95 percent of the total mileage of all railroads in the United States and have gross revenues approximating 95 percent or more of the total gross revenues of all railroads in the United States.

May I say at the outset that this committee is to be complimented for its wisdom and foresight in undertaking this investigation into the readiness of our transportation systems in advance of an emergency, for as Col. J. Monroe Johnson so well said in his classic statement summarizing the science of logistics: "You have no more of anything than you can deliver where it is needed."

That statement by a great transportation authority, whose long and outstanding record of service to America included the vital assignment of directing the Office of Defense Transportation in World War II, is amply borne out both by experience and by testimony of highly placed officers of all of our military services.

Speaking for the Army as well as for other military services, Gen. Brehon Somervell, Commander of the Army Service Forces in World War II said:

> We in the Armed Forces of the United States think of transportation as a military tool—a weapon as important as the very tank or gun it transports from factory to fighting front. It is no exaggeration to say that railroads are war roads. (Brehon Somervell, radio broadcast, July 17, 1944.)

Vice Adm. Louis Denfeld, Chief of Naval Personnel in World War II, has said:

> It is a recognized fact that land transportation is as vital to our Navy as water transportation. It is indispensable to the building and manning of the fleet. Without it naval operations would be impossible * * *. From the standpoint of national security, the readiness of the railroads is equal in importance to the readiness of the Navy. (Louis Denfeld, October 1946.)

And speaking for the Air Force, the great wartime Commanding General of our Air Force, Gen. H. H. Arnold, added:

> A general statement can be made that loss of domestic rail transport will effectively stop all present and proposed Air Force operations. (H. H. Arnold, letter to Secretary of War, Henry L. Stimson, December 28, 1943.)

Transportation, then, is a matter of vital public interest and concern. It is part and parcel of national survival. How transportation responds in time of war can spell the difference between victory and defeat. I make this point because transportation service too often is taken for granted. Like a roof, we may not realize it's there until a storm strikes.

This investigation is especially timely, Mr. Chairman, because as you so well said in your opening statement:

> The fact that we had time to prepare and to build up our transportation capacity in previous conflicts, is no assurance that the same period of grace will be extended to us again * * *. We must accept the harsh reality that we may not have time and that our planning must of necessity be concerned with such things as evacuation and resettlement, aid to damaged areas, travel into and through areas of fallout, resupply of military bases, restoration of utilities and the supply of the most basic elements necessary for survival.
>
> Only the foolhardy—

you said—

> would believe that such a situation is improbable and we, in a position of responsibility, will neglect to the peril of all, the means to supply these necessities.

With that statement, we in the railroad industry could not agree more, and I assure you of our earnest desire to contribute in any way we can to the success of this urgent and important investigation.

The statement I have prepared is in four parts. In the first part, I discuss briefly the vital job that railroads did in World War II and

in the Korean war, and why railroads will continue to be relied upon as the Nation's principal carrier, especially in time of emergency. While this is perhaps a repetition of facts already documented and well known, I believe it is necessary to have them in this record in order to place in proper perspective the discussion that follows. They may also serve, together with other pertinent facts, as a basis for measuring or defining the part that railroads might be expected to have in another war.

In the second part of my statement, I discuss the present capability of railroads to meet another emergency should one occur; in the third, some of the reasons why the railroads are not better prepared; and finally, some of the steps we believe necessary to enable railroads to prepare adequately for their part in a period of national emergency.

First, the reliance on railroad transportation in World War II and the Korean war, and why.

Although the figures have been cited time and again, it is worth repeating here that railroads in World War II were relied upon for the transportation of over 90 percent of all military freight and over 97 percent of all organized military travel. (Report of the Chief of Transportation, Army Service Forces, World War II—Washington, D.C., War Department, 1945, pp. 20, 25.) At the peak of the war, in 1944, the volume of freight moving by rail was double the prewar volume and the passenger volume had multiplied four times.

From 379 billion ton-miles in 1940, the volume of freight service performed by railroads rose steadily throughout the war period (see tables I and II).

(The tables referred to are as follows:)

TABLE I.—*Distribution of intercity freight traffic in the United States* [1]

[Millions of ton-miles]

Year	Railroads [2]	Motor-trucks [3]	Great Lakes [4]	Rivers and canals	Oil pipe-lines	Air carriers	Total
1939	338, 850	52, 821	76, 312	19, 937	55, 602	12	543, 534
1940	379, 201	62, 043	95, 645	22, 412	59, 277	14	618, 592
1941	481, 756	81, 363	113, 639	26, 815	68, 428	19	772, 020
1942	645, 422	59, 896	122, 167	26, 398	75, 087	34	929, 004
1943	734, 829	56, 784	115, 346	26, 306	97, 867	53	1, 031, 185
1944	734, 829	56, 784	115, 346	26, 306	97, 867	53	1, 031, 185
1945	690, 809	66, 948	113, 028	29, 709	126, 530	91	1, 027, 115
1946	602, 069	81, 992	96, 002	27, 951	95, 727	93	903, 854
1947	664, 523	102, 095	112, 165	34, 549	105, 161	158	1, 018, 651
1948	647, 267	116, 045	118, 707	[5] 43, 139	119, 597	223	1, 044, 978
1949	534, 694	126, 636	97, 503	41, 893	114, 916	235	915, 877
1950	596, 940	172, 860	111, 687	51, 657	129, 175	318	1, 062, 637
1951	655, 353	188, 012	119, 984	[5] 62, 232	152, 115	379	1, 178, 075
1952	623, 373	194, 607	104, 530	63, 837	157, 502	415	1, 114, 264
1953	614, 199	217, 163	127, 383	[5] 75, 056	169, 884	413	1, 204, 098
1954	556, 557	214, 626	91, 175	[5] 82, 504	179, 203	397	1, 124, 462
1955	631, 385	226, 188	118, 845	97, 663	203, 244	481	1, 277, 806
1956	655, 891	253, 751	110, 665	109, 313	229, 595	563	1, 360, 142
1957 [6]	626, 222	260, 856	117, 231	114, 561	232, 660	601	1, 352, 131
1958 [7]	559, 000	260, 000	85, 000	106, 000	223, 000	650	1, 233, 650

[1] Includes intercity freight traffic of private as well as contract and common carriers, except coastwise and intercoastal traffic.

[2] Ton-miles of freight, express, and mail of class I, II, and III line-haul railways and electric railways.

[3] Highway ton-miles include movements between cities and between rural areas and urban areas; rural-to-rural movements, city deliveries, and city movements to or from contiguous suburbs are omitted.

[4] Includes Canadian and oversea traffic on the Great Lakes.

[5] New coverage accounted for increases over the preceding year of 2.6 billion ton-miles in 1948, 4.3 billion in 1951, 6.4 billion in 1953, and 6.7 billion in 1954. Thus, the table indicates a greater increase in traffic on rivers and canals in recent years than has actually occurred.

[6] Preliminary.

[7] Estimated.

Source: Interstate Commerce Commission; Corps of Engineers, U.S. Army. July 1959.

TABLE II.—*Distribution of intercity freight traffic in the United States* [1]

[Percentage distribution]

Year	Railroads [2]	Motor-trucks [3]	Great Lakes [4]	Rivers and canals	Oil pipe-lines	Air carriers	Total
1939	62.4	9.7	14.0	3.7	10.2	----------	100.0
1940	61.3	10.0	15.5	3.6	9.6	----------	100.0
1941	62.4	10.5	14.7	3.5	8.9	----------	100.0
1942	71.3	5.5	11.2	2.5	9.5	----------	100.0
1943	71.3	5.5	11.2	2.5	9.5	----------	100.0
1944	68.6	5.4	10.9	2.9	12.2	----------	100.0
1945	67.3	6.5	11.0	2.9	12.3	----------	100.0
1946	66.6	9.1	10.6	3.1	10.6	----------	100.0
1947	65.3	10.0	11.0	3.4	10.3	----------	100.0
1948	61.9	11.1	11.4	[5] 4.1	11.5	----------	100.0
1949	58.4	13.8	10.6	4.6	12.6	----------	100.0
1950	56.2	16.3	10.5	4.9	12.1	----------	100.0
1951	55.6	16.0	10.2	[5] 5.3	12.9	----------	100.0
1952	54.5	17.0	9.1	5.6	13.8	----------	100.0
1953	51.0	18.1	10.6	[5] 6.2	14.1	----------	100.0
1954	49.5	19.1	8.1	[5] 7.4	15.9	----------	100.0
1955	49.4	17.7	9.3	7.7	15.9	----------	100.0
1956	48.2	18.7	8.2	8.0	16.9	----------	100.0
1957 [6]	46.3	19.3	8.7	8.5	17.2	----------	100.0
1958 [7]	45.3	21.1	6.9	8.6	18.1	----------	100.0

[1] Includes intercity freight traffic of private as well as contract and common carriers, except coastwise and intercoastal traffic.
[2] Ton-miles of freight, express, and mail of class I, II, and III line-haul railways and electric railways.
[3] Highway ton-miles include movements between cities and between rural areas and urban areas; rural-to-rural movements, city deliveries, and city movements to or from contiguous suburbs are omitted.
[4] Includes Canadian and oversea traffic on the Great Lakes.
[5] New coverage accounted for increases over the preceding year of 2.6 billion ton-miles in 1948, 4.3 billion in 1951, 6.4 billion in 1953, and 6.7 billion in 1954. Thus, the table indicates a greater increase in traffic on rivers and canals in recent years than has actually occurred.
[6] Preliminary.
[7] Estimated.

Source: Interstate Commerce Commission; Corps of Engineers, U.S. Army. July 1959.

Mr. LOOMIS. In 1941, the railroad freight traffic volume was 127 percent of 1940; in 1942, 170 percent; in 1943, 194 percent; and in 1944, 197 percent. Of the total intercity movement of freight both civilian and military, by all forms of transportation, the railroads' share increased from 61 percent in 1940 to a high of 71 percent in 1943.

This outstanding performance was in striking contrast to the experiences of other forms of transportation during the war period.

Freight transportation service by highway rose steadily in the years immediately preceding the war, reaching a peak of 81 billion ton-miles in 1941. From that point, truck volume fell to 60 billion ton-miles in 1942; to 57 billion in 1943; and 58 billion in 1944. As a percentage of total intercity freight movement, highway transportation fell from 10.5 percent in 1941 to 5.4 percent in 1944.

On the inland waterways, there was an increase in total transportation volume, but a decrease in relation to total intercity traffic moved. From 3.6 percent of the total in 1940, the share of total traffic handled by water carriers declined in 1943 to 2.5 percent.

In the wartime movement of passengers, the results were even more striking. (See tables III and IV.)

(The tables referred to are as follows:)

TABLE III.—*Distribution of intercity passenger traffic in the United States* [1]

[Millions of passenger-miles]

Year	Steam railroads	Buses	Air carriers	Electric interurban railways	Inland waterways [2]	Total
1939	22,713	9,100	683	956	1,486	34,938
1940	23,316	9,800	1,052	950	1,317	36,935
1941	29,406	13,100	1,385	1,177	1,821	46,889
1942	53,747	20,900	1,418	1,326	1,860	79,251
1943	87,925	25,500	1,634	1,940	1,927	118,926
1944	95,663	26,920	2,178	2,042	2,187	128,990
1945	91,826	27,027	3,362	1,709	2,056	125,980
1946	64,754	26,293	5,948	1,484	2,327	100,806
1947	45,972	23,948	6,110	771	1,845	78,646
1949 [3]	35,133	27,933	8,616	842	1,402	73,926
1950	31,790	26,436	10,072	691	1,190	70,179
1951	34,640	27,418	12,938	666	1,333	76,955
1952	34,033	28,704	14,988	677	1,396	79,798
1953	31,679	28,398	17,430	582	1,487	79,575
1954	29,310	25,614	19,568	157	1,701	76,350
1955	28,548	25,519	22,741	147	1,738	78,693
1956	28,216	25,189	25,523	394	1,860	81,182
1957 [4]	25,914	24,998	28,302	337	1,930	81,481
1958 [5]	23,300	23,900	28,300	300	1,800	77,600

[1] Passenger-miles in private automobiles not included.
[2] Great Lakes, rivers and canals.
[3] Bus estimates for 1949 and later years have been expanded to include urban portions of intercity trips as well as revised load factors. Revised series for air carriers (1949 to date) include passenger-miles of both scheduled and nonscheduled commercial carriers and intercity passenger-miles in pleasure or private and business-firm operated planes.
[4] Preliminary.
[5] Estimated.

Source: Interstate Commerce Commission; Civil Aeronautics Board; Corps of Engineers, U.S. Army, July 1959.

TABLE IV.—*Distribution of intercity passenger traffic in the United States* [1]

[Percentage distribution]

Year	Steam railroads	Buses	Air carriers	Electric interurban railways	Inland waterways [2]	Total
1939	65.0	26.0	2.0	2.7	4.3	100.0
1940	64.5	26.5	2.8	2.6	3.6	100.0
1941	62.7	27.9	3.0	2.5	3.9	100.0
1942	67.8	26.4	1.8	1.7	2.3	100.0
1943	73.9	21.5	1.4	1.6	1.6	100.0
1944	74.2	20.8	1.7	1.6	1.7	100.0
1945	72.9	21.4	2.7	1.4	1.6	100.0
1946	64.2	26.1	5.9	1.5	2.3	100.0
1947	58.5	30.4	7.8	1.0	2.3	100.0
1948	56.4	32.2	8.2	.9	2.3	100.0
1949 [3]	47.5	37.8	11.7	1.1	1.9	100.0
1950	45.3	37.7	14.3	1.0	1.7	100.0
1951	45.0	35.6	16.8	.9	1.7	100.0
1952	42.6	36.0	18.8	.8	1.8	100.0
1953	39.8	35.7	21.9	.7	1.9	100.0
1954	38.4	33.6	25.6	.2	2.2	100.0
1955	36.3	32.4	28.9	.2	2.2	100.0
1956	34.8	31.0	31.5	.4	2.3	100.0
1957 [4]	31.8	30.7	34.7	.4	2.4	100.0
1958 [5]	30.0	30.8	36.5	.4	2.3	100.0

[1] Passenger-miles in private automobiles not included.
[2] Great Lakes, rivers and canals.
[3] Bus estimates for 1949 and later years have been expanded to include urban portions of intercity trips as well as revised load factors. Revised series for air carriers (1949 to date) include passenger-miles of both scheduled and nonscheduled commercial carriers and intercity passenger-miles in pleasure or private and business-firm operated planes.
[4] Preliminary.
[5] Estimated.

Source: Interstate Commerce Commission; Civil Aeronautics Board; Corps of Engineers, U.S. Army, July 1959.

Mr. LOOMIS. Railroad passenger volume, civilian and military combined, jumped from fewer than 25 billion passenger-miles in 1940 to nearly 98 billion in 1944. As a percentage of total commercial intercity passenger traffic by all carriers, the railroad share increased in the same period from 67 percent to 76 percent. In contrast, the share of passenger traffic handled by buses decreased from 27 percent of the total in 1940 to 21 percent in 1944; and the share handled by domestic air carriers in the same years decreased from 3 percent to less than 2 percent. Both bus and air carriers experienced substantial absolute increases in traffic volume, but their combined total in 1944 still was less than one-fourth the total passenger volume.

Even in the Korean war, in which other carriers were not hampered by rationing of fuel and scarce materials as they were in World War II, the predominant reliance of the military on railroads in time of emergency was apparent. Military freight routed by railroad during the years 1951–54 amounted to 72 percent of the total. Of the remainder, 23 percent moved by highway and 5 percent by water. In the movement of military passengers, counting both group travel and individuals, railroads handled 64 percent of the total; airlines handled 30 percent, and buses, 6 percent. (Source: Department of the Army, Office Chief of Transportation, Statistical Section.)

Why this vastly increased reliance on railroads by the military in time of war?

One important reason was well stated by the Presidential Advisory Committee on Transport Policy and Organization in its report to the President of April 1955. The report said:

> The railroads may be expected to have the greatest flexibility in accommodating an expanded domestic traffic with a minimum increase in equipment, since other forms of transportation as a rule require additions to equipment in direct ratio to an increase in traffic handled, and this is not the case with the railroad industry. (Revision of Federal Transportation Policy. A report to the President—Washington: Presidential Advisory Committee on Transport Policy and Organization, April 1955, p. 5.)

What this inherent characteristic of railroads—and only railroads—means in time of emergency was strikingly demonstrated in World War II. Not only were railroads in 1944 able to handle double their 1940 volume of freight and four times their 1940 volumes of passengers, but they did so with increases of less than 38 percent in the number of railroad employees, and less than 5 percent in the number of locomotives, a 7-percent increase in the number of freight cars, and less than a 6-percent increase in the number of passenger-carrying cars. (See table V.)

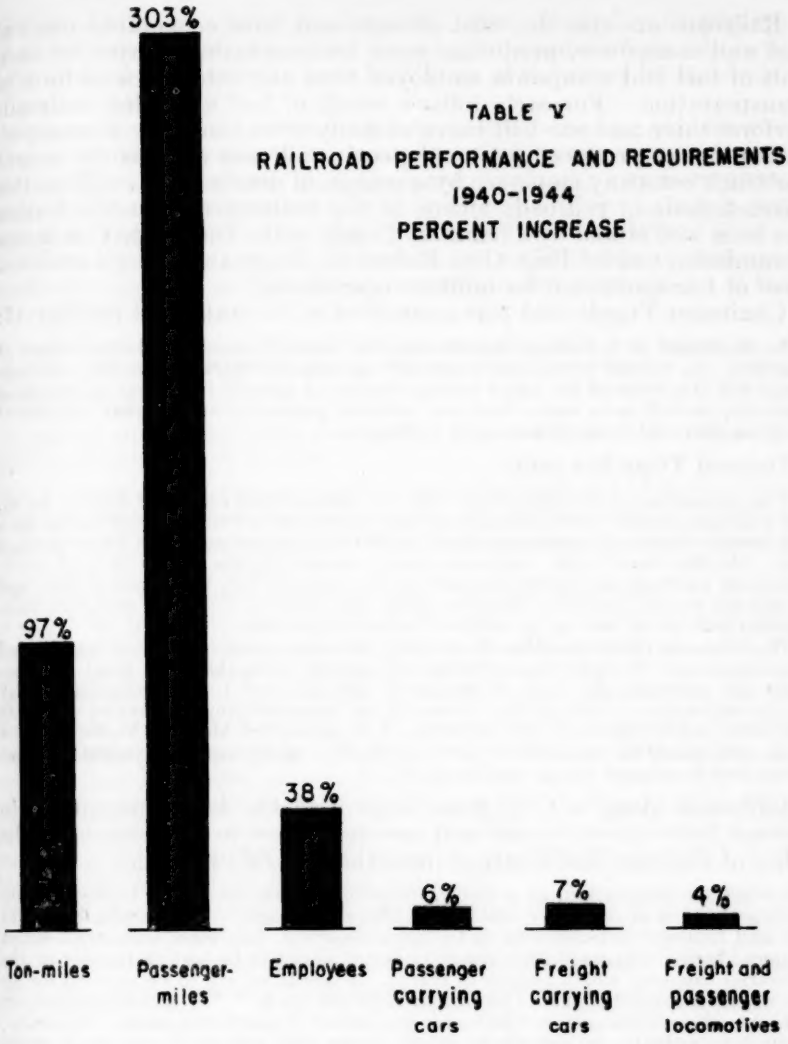
To a nation at war, striving to bring the full weight of its resources to bear in direct prosecution of the war effort, the great significance of this characteristic of elasticity, found only in railroads, cannot be overstated.

Nor is this the only or even necessarily the most important of railroad characteristics that have vital military meaning.

(The table referred to above is as follows:)

TABLE V

RAILROAD PERFORMANCE AND REQUIREMENTS
1940-1944
PERCENT INCREASE



Railroads are characterized by numerous alternate routes and by standardization of equipment which permits the cars and locomotives of any one railroad to move in trains of any other railroad. They also operate under standard rules and procedures, so that in any emergency, trains can be swiftly and easily rerouted around a point of interruption. Arrangements to this effect are long established and time tested. They have been in existence so long and are so well-known throughout railroad organizations, that a telephone call between local offices usually suffices to put them into effect.

Railroads are also the most efficient and most economical users of fuel and manpower, producing more transportation service for each unit of fuel and manpower employed than any other general form of transportation. For each dollar's worth of fuel expended, railroads perform three and one-half times as many gross ton-miles of transportation service produced per employee on railroads exceeds the output per truck company employee by a margin of nearly 6 to 1. What this characteristic of railroads means to the military and to the Nation has been well stated by Chairman Tuggle of the Interstate Commerce Commission and by Brig. Gen. Robert C. Tripp, the Army's assistant chief of transportation for military operations.

Chairman Tuggle told this committee in his statement on July 17:

> In the event of a national emergency, the country would find itself short of gasoline, oil, rubber tires, and necessary automotive parts. On the railroads could fall the demand for quick transportation of greatly increased quantities of material, as well as to carry both our military personnel and a great number of civilians diverted from airways and highways.

General Tripp has said:

> The economies of movement by rail are tremendous and well known to all. For example, one of our studies shows that to support 10 divisions of troops by a 100 percent airline of communications of 500 miles would cost over $6 million per day. On the other hand, a system closely resembling the World War II transportation network in Europe consisting of 1 percent air, 9 percent motor, and 90 percent rail for the same distance would cost only $177,000 per day, less than one-thirtieth of the cost of an airline of communications.[1]
>
> The inherent characteristics of economy for volume movements of freight and passengers and of rapid expansibility of capacity with the same fixed facilities make the railroads the form of transport best adapted to accommodate vastly swollen defense and military requirements for transportation in time of war. As compared with highways, for example, it is estimated that 20 highways of 4 lanes each would be required to carry automobile traffic equal in volume to that which just 2 railroad tracks can handle.[2]

Railroads along with highways are also the least susceptible to damage from enemy attack and are the easiest to be restored. The Office of Defense Mobilization (now the OCDM) has said:

> Surface transportation, as a whole, including the railroads and highways connecting cities, is of relatively low vulnerability to attack. Motive power, freight cars and highway vehicles tend to be more dispersed than most industrial target systems; hence, transportation capacity is not likely to be lost as rapidly as the industrial capacity which generates traffic. Exceptions are to be noticed for air and ocean transportation. The former depends upon * * * a communications and air traffic control system which also is centered at particular points. Similarly, ocean transportation capacity is governed by the ability to effect transfer between ship and land transportation in the ports. Although a surplus of port capacity is normally available, the large ports are highly vulnerable and the necessity to disperse shipping into the smaller ports will create operating problems of considerable magnitude.[3]

The Army Corps of Engineers, in a statement filed with the committee in these hearings, has pointed out that "restoration of a lock site destroyed by a nuclear weapon would possibly require the design and construction of new locks." This the corps estimated "would require many months, probably years." As examples of waterway facilities that could be impaired for long periods of time by destruction

[1] Robert C. Tripp, address before the Armed Forces Chemical Association Conference (Atlantic City, N.J., June 6, 1958).
[2] Wilfred Owen, The Metropolitan Transportation Problem (Washington, D.C.: The Brookings Institution, 1956), p. 141.
[3] Reducing Our Vulnerability to Attack (Washington, D.C.: Office of Defense Mobilization, May 20, 1957), p. 16.

of locks and dams, the corps statement cited the upper Mississippi and Ohio River systems, the "Soo Locks and Canada's Welland Canal on the Great Lakes, and the locks and dams of the recently completed St. Lawrence Seaway."

In contrast, the ability of railroads to absorb punishing attacks and make quick recovery has been demonstrated in every war, including even the atomic attacks on Hiroshima and Nagasaki. At Hiroshima, regular rail service was resumed within 18 hours after the bomb was dropped. The U.S. Strategic Bombing Survey covering World War II operations in Europe credits the railroad system of Germany with giving effective support to the German war effort throughout most of the war, saying:

> It was generally adequate for the demands placed upon it until the spring of 1944 * * * when a slow decline in capacity began to be apparent.

The survey added:

> The recuperative powers of the Reichsbahn were great though weaker than they would have been earlier in the war.[4]

More recently, in Korea, a poorly developed railroad system, often under concentrated and prolonged enemy attack, nevertheless handled 98 percent of all tonnage and all United Nations troops passing through the Korean ports of supply.

One reason why rail lines and structures are so difficult to knock out and keep out of operation is that the work of restoration involves no new experience for trained railroad men. Unlike other modes of transportation, railroads do not and need not rely upon Government agencies to make necessary repairs to roadway or other vital facilities; they do the work themselves, using railroad personnel and railroad funds. Damage caused by enemy bombardment, demolition, or sabotage does not differ greatly from the ravages of fire, flood, landslide, earthquake, and other natural causes with which railroaders have dealt for more than 100 years. Indeed, it is doubtful if any conceivable enemy action could equal in severity emergencies with which nature sometimes confronts railroads.

Such an emergency was the earthquake that struck the main line of a large western railroad in 1952, causing severe damage to eight tunnels, several bridges and fills, and blocking large sections of land with huge landslides. Just 26 days after the quake, a train of 100 freight cars used the restored line, and 2 days later passenger trains were using it. During the period of restoration, traffic moved smoothly by an alternate route.

This unique ability of railroads to help themselves was the characteristic to which Chairman Tuggle of the Interstate Commerce Commission referred when he told the committee on July 17:

> The railroads are self-reliant and used to repairing damage from floods, fire, and other disasters in a hurry; and they can do the same in war when tracks, structures, and trains are main targets for bombs and sabotage.

Mr. Tuggle added:

> In a nuclear attack we expect less damage to railroad equipment, property, and trackage than to industrial facilities, due to the greater dispersal and reduced vulnerability of the railways.

[4] The U.S. Strategic Bombing Survey (Washington, D.C.: U.S. Government Printing Office, Sept. 30, 1945), pp. 59–61.

Of all forms of transportation, only railroads have the additional security of a privately maintained nationwide police force. In time of emergency this highly trained organization not only helps guard against interruption of train movements and sabotaging of vital railroad installations but also cooperates closely with forces of Federal, State, and local governments in security matters generally. In this vital area of protection, security, and advance planning to guard against enemy espionage and sabotage, the committee will perhaps be interested in the brochure, "Railroad Planning for Defense: A Guide," that is appended to my statement. This guide, which was prepared by the Association of American Railroads in cooperation with interested agencies of the Federal Government, has been given wide distribution throughout the railroad industry.

Still other characteristics of railroads that make them indispensable in an emergency were noted recently by Maj. Gen. Samuel R. Browning, Deputy Chief of Transportation of the Army. General Browning observed:

"Freight and passenger equipment can be assembled and moved in mixed trains. Military units moving in these mixed trains with their baggage, records, messing facilities, weapons, and impediments arrive at destination ready for military operations or for immediate movement by other modes of transportation to the area of operations. Plans for rail movements of military units are easily made and the move fully controlled centrally because of the standard equipment, procedures, and efficient communications system of the railroads. These are important attributes to efficient military operations in emergencies." [5]

There is much more that could be said in this vein, but the point I think is clear. It is that railroads are absolutely vital to our national strength and security. They are vital because neither the Army, Navy, Marines, or Air Force could long function effectively without the services railroads provide.

Nor is this basic reliance on railroads lessened in any degree by changed concepts of war and defense. If anything, these changed concepts make reliance on railroads greater than ever. Whether another war is fought by conventional means or nuclear, or whether the war is over in a matter of days or years, authorities generally agree that destruction on both sides would be widespread and severe. In the vital work of reconstruction following an attack, involving perhaps unprecedented demand for mass transportation with minimum drain on resources already seriously depleted by destructive forces of the enemy, railroads would have their greatest role. Indeed in an all-out test of survival, railroads literally could mean the difference between victory and defeat. For in this continentwide, highly integrated, and tightly controlled network of rails, rolling stock, terminals, and communications systems lies one of America's greatest defense assets.

Railroads would be required not only in the vital recovery effort following an attack but also in direct support of every action of American armed forces, whether on offense or defense. New developments in weapons concepts suggest even greater military usefulness for and reliance on railroads in the future than in the past. Task force trains can move on short notice to any location along 220,000 miles of railroad in the United States, and, if needed, to points in Canada and Mexico.

[5] "Problems of the Railroads," pt. 3, hearings before the Subcommittee on Surface Transportation of the Committee on Interstate and Foreign Commerce, U.S. Senate (Washington, D.C., 1958), p. 1806.

Under the strict discipline of railroad organization and control, made possible by the railroads' incomparably efficient system of signals and communication, the whereabouts of such trains would be known at all times, their movements controlled and given protection and priority as required.

In the light of this demonstrated importance of railroads to national defense, your committee is well warranted, Mr. Chairman, in seeking to determine whether railroads are as strong, healthy, and well prepared as they should be to assume their vital defense responsibility. Under Secretary Allen of the Department of Commerce said in his statement to you on July 15 that there are "trouble spots" in our transportation industry and that one of these trouble spots is the railroad industry. I agree entirely with Mr. Allen, for it is a fact that the railroad industry does not today have the reserve equipment to meet an emergency increase in traffic that it had in 1940—this despite new capital expenditures totaling more than $14 billion since the end of World War II to provide new motive power and cars, new automatic yards, new centralized traffic control, and a host of other new efficiently producing improvements.

When railroads entered World War II they owned substantially more cars than they needed to cover prewar requirements. Without that surplus, they could not have met the wartime demands upon them. Instead, steel, vitally needed for tanks, planes, and guns, would have had to be diverted in far greater quantity than it was for freight car construction. It is a sobering fact that today not only is there no car surplus but railroads are hard pressed to meet peacetime demands. Any deterioration of the freight car supply, whether as a result of enemy action or inability of the railroads to purchase enough new cars, could be disastrous.

Witnesses for the Department of Defense have indicated to you the probable extent and nature of military requirements for railroad service in another emergency. These requirements are, as you know, substantial. I must emphasize, however, that these are only the direct requirements of military agencies; they do not embrace the infinitely greater transportation requirements of defense and civilian production for which the OCDM is responsible, nor do they take into account the day-to-day transportation necessary to support our domestic economy and 177 million Americans, which, incidentally, is 40 million Americans more than existed at the end of World War II. Witnesses for the OCDM have told the committee that the first complete evaluation of total requirements in an emergency is expected to become available under the Operation Alert exercise this year.

Between 1940 and 1944, despite a nationwide rationing program to eliminate all but essential civilian requirements, the Nation's use of freight transportation service by all modes increased 76 percent—from 619 billion ton-miles to 1,088 billion ton-miles. Of this enormously increased traffic volume, railroads absorbed over three-fourths; other forms, mainly water carriers and oil pipelines, less than one-fourth. Without the surplus railroad capacity that existed in 1940, and with scarce resources and materials again required for direct application to a war effort, we may well ask how large an increase in traffic the railroads could again be counted upon to handle in an emergency.

As to motive power, the situation is perhaps not as critical as the car supply. The reason of course is the intensive program of diesel-

ization upon which railroads embarked immediately after the war. Even so, there is no substantial surplus of motive power with which to handle a sharp increase in traffic volume, such as might occur in another war. Moreover, many diesels are nearing the age for retirement or rebuilding, so that a sudden increase in the traffic load would have to be accompanied by a substantial locomotive building program.

Most critical of all perhaps is the passenger-car situation. Since 1944, ownership of passenger-carrying has declined from over 31,000 to about 20,000, a loss of over one-third. Included in today's ownership are some 1,500 pullman cars, leased and stored by the Department of Defense.

If military requirements in an emergency are only half as great as in 1944, when approximately 7,700 cars were assigned to military use, the number of cars remaining for civilian travel would be no more than 16,300, or little more than two-thirds the number available for civilian use in that year. These remaining cars would all be coaches, since military requirements would absorb all available sleeper accommodations.

This decline in the passenger-carrying capacity of railroads may be all the more serious in view of plans already agreed upon and announced publicly by the Department of Defense and the airline industry that would remove instantly all four- and twin-engine aircraft from commercial operation and assign them exclusively to defense or military use.

As explained by the Air Transport Association of America:

> The airlines—in cooperation with the Department of Defense and other Government agencies—have established the Civil Reserve Air Fleet (CRAF) and the War Air Service Pattern (WASP) for maximum domestic and global military airlift in time of national emergency.
>
> The CRAF—composed of 368 long-range four-engine airliners, including 314 from the scheduled airline fleets—would operate on a global basis, carrying troops, supplies and equipment in support of the military effort. All remaining four- and twin-engine aircraft in the civil fleets would make up the WASP to provide an intensive system of priority airlift in support of defense production at home.[6]

Why, you may ask, are railroads not better prepared to meet the demands that would fall upon them in another emergency?

There are many reasons, but the principal one is Government policy that gives enormous financial and other assistance to railroad competitors on the one hand while artificially restricting the railroads in their efforts to compete on the other.

As is indicated in the several tables appended to my prepared statement, Federal, State, and local governments combined have poured into domestic transportation facilities tax funds amounting to some $150 billion. Of this amount, it is an ironic fact that the overwhelming part by far nearly $138 billion has gone to provide a means of transportation that in the 4 years of World War II, when it was most needed, accounted for actually fewer ton-miles of transportation on the average than it did in the years just before the war. I refer, of course, to highways, which as I said earlier, produced only 58 billion ton-miles of freight-transportation service in 1944 as compared with 81 billion ton-miles in 1941.

While there is disagreement as to the precise amount that has been recovered from users of publicly provided facilities in direct user

[6] "Air Transport Facts and Figures," 1958 edition (Washington, D.C., Air Transport Association of America), pp. 9–10.

charges, there can be no disagreement that these vast expenditures of public funds constitute a distinct advantage for carriers of other transport modes and a severe handicap for the entirely self-supporting railroads. This, in fact, was a principal conclusion of the Interstate Commerce Commission in its recently completed investigation into the railroad passenger-train deficit. The Commission said in its report:

> The impetus given motor and air travel by Federal, State, and local government promotional programs has unquestionably operated to the disadvantage of railroad passenger service. Vast highway, airport, and airway modernization programs predicated upon anticipated public needs which are now underway, as well as a policy for continued subsidy to air carriers, offer little solace to an industry which is dependent upon private resources and which has witnessed the gradual erosion of its passenger market. It is not suggested that such programs are not meritorious and desirable in the public interest, but the fact is they do exist; they will, as in the past, have a pronounced impact upon railroad passenger service. Yet, there is little evidence of any comparable governmental effort to promote the public interest in railroad passenger service or to prevent or to take into account competitive inequalities that may be induced by such promotional programs.[7]

The report concluded:

> On this record, we are convinced that inequalities exist which discriminate against rail carriers in their attempt to meet the public need for rail service at equitable charges * * *.[8]

No useful purpose would be served by giving here a detailed picture of all the things being done by Government to promote forms of transportation other than railroads. They include, however, the vast and costly projects listed by Mr. Jones of the OCDM, such as the Federal Highway Fund, the St. Lawrence Seaway project, river and harbor projects, air navigational controls, and so forth.

Another reason for the relatively unsatisfactory progress made by railroads in preparing for their defense role is that Department of Defense policies as to allocation of military traffic among the several forms of transportation in time of peace are inconsistent with its predominant reliance on railroads in time of war. Speaking of this inconsistency in routing of military passenger traffic, the Commission said in its report:

> The record discloses that the railroads handled approximately 97 percent of all organized military personnel movements during World War II. Although the Department is unable to state the precise extent to which it would rely upon the railroads in future emergencies, it would rely upon them for a "great proportion" of its needs. The Department would also rely exclusively, insofar as passenger-train service is concerned, on locomotive power financed out of the earnings of and private capital invested in such railroads. It would also rely on employees trained at railroad expense to conduct the transportation. In these circumstances, we cannot agree with the Department that the distribution of military traffic on bases other than costs would in effect be a hidden subsidy and an improper use of appropriations. We urge the Department of Defense in selecting the means of transporting its military personnel to place appropriate emphasis on the means upon which it will rely heavily in time of emergency.[9]

Although the Commission's investigation dealt with only the passenger service, the same reasoning presumably would apply to Department of Defense policies as to the movement of goods.

The ICC report also listed several other factors contributing to the passenger-train deficit, among them continuation of the Federal excise tax of 10 percent on travel, inequitable tax policies of State and local

[7] "Railroad Passenger Train Deficit," report of the Interstate Commerce Commission, Docket 31954 (Washington, D.C., May 18, 1959), p. 97.
[8] Ibid., p. 102.
[9] Ibid., p. 91.

governments as applied to railroads on the one hand and competing forms of transportation on the other, and outmoded rules and practices governing the work and pay of railroad employees.

Other causes not mentioned by the Commission include Government regulation that severely restricts railroads the right to use fully their advantage of low cost in the competition for traffic; that denies railroads the right to diversify their services through the use of highway, air and waterway facilities, which railroad taxes helped build and help to operate and maintain; that denies railroads equal opportunity to compete freely for large areas of agricultural traffic exempted from regulation under the Interstate Commerce Act if transported by motor vehicle; that frustrates vitally needed modernization of railroads through unsound and unrealistic tax policies governing depreciation of railroad plant and equipment; that imposes on railroads burdensome and unwarranted costs through unsound legislation, such as the recently enacted increases in retirement and unemployment benefits for railroad employees.

Despite these and other serious handicaps, I wish to assure you, Mr. Chairman, that both the Congress and the Nation can rely on railroads to do the best job of which they are capable in case of another emergency. Though our great terminal centers are destroyed, as it is predicted some may be, we will recover as no other carrier can and keep the trains rolling. And when gasoline and rubber supplies diminish, and other traffic grinds to a halt, railroads again will do their best to take up the slack.

To do the job may require superhuman effort, and you may be assured that the railroads will put forth that effort. But I would be derelict in my duty if I did not tell you in all candor that the Nation can and should make it possible for railroads to build far greater strength and capacity into its railroad plant than it now has.

It should build now while the manpower and materials are available—not when an emergency is upon us and our resources are critically needed in other vital areas of war work.

To restore the railroads' earning power and thereby enable them to prepare adequately for their vital role in the Nation's defense, railroads endorse several of the recommendations of the Interstate Commerce Commission in its report on the passenger train deficit and add some of their own. Among the ICC recommendations the following are especially worthy of consideration:

(1) That the 10 percent Federal excise tax on passenger fares be repealed.

(2) That Federal tax laws be amended to encourage local and State tax relief, at least to the extent of disregarding, for Federal tax purposes, railroad "pretax net income" that results from easing State and local tax burdens.

(3) That State and local governments take such steps as may be required to effect a greater degree of equity in respect to tax burden on railroad property in relation to taxpayers generally and consistent with the desire of their communities for retention of commuter and other passenger train service.

(4) That where the railroads are unable to operate a particular local or commuting service at a profit, and where such service is essential to the community or communities served, that steps be taken by

State and local authorities, or both, to provide the service paying the carrier the cost-plus a reasonable profit.

(5) That the executive departments of the Federal Government consider the implications of the national transportation policy in connection with the procurement of passenger train services by the Post Office Department, Department of Defense and other agencies of the Government. Here again the same reasoning presumably would apply to policies of executive departments relative to movements of goods.

I should emphasize that the aforementioned recommendations are an outgrowth of the Commission's investigation into the passenger end of the railroad business only; the Commission did not concern itself in this investigation with the movement of freight. The railroad industry makes the following additional recommendations in the belief that they are essential to strengthening the railroad capacity on transportation service of all kinds.

(1) That special restrictions on the right of railroads to engage in other forms of transportation be removed so that the railroads will be permitted to offer to the public the benefits of a truly coordinated transportation service and at the same time strengthen their own operations through providing such a service.

(2) That commercial users of publicly provided transportation facilities be required to pay adequately for that use.

(3) That the agricultural commodities exemption now provided by the Interstate Commerce Act for motor vehicles should be repealed or, in the alternative, extended to include rail carriers.

(4) That railroads be permitted to set aside in a construction reserve, funds with which to buy new plant and equipment and to count these funds as deductible expenses in figuring the amounts they pay each year in Federal income tax.

(As to this recommendation, may I remind the committee of the special consideration of a similar nature that Congress in its wisdom has seen fit to accord to the maritime industry, largely on grounds of its importance to defense. I know of no other measure that could be more readily put into effect or would yield more positive or faster results in creating additional transportation capacity than this tax change. It is significant that in 1955, the last year railroads could qualify for accelerated 5-year amortization of defense-support investments, they placed orders for 157,407 new freight cars. This 1-year order total, if repeated, would go far toward modernizing and expanding the car fleet that is so essential to national defense preparedness and security. The committee may recall that this proposal for a construction reserve fund was one of the recommendations made by the Senate Surface Transportation Subcommittee, whose investigation of the railroad situation last year preceded passage of the Transportation Act of 1958. The recommendation was adopted by the Senate Interstate and Foreign Commerce Committee, but was deleted from the bill without prejudice in floor action as a matter that should first receive attention by the Senate Finance Committee.)

(5) Our final recommendation is that railroads be permitted to recover the money they invest in cars and locomotives in a 15-year period and their investment in fixed plant and facilities in a maximum of 20 years instead of a 40-year average as at present.

Mr. Chairman, another witness will deal with these two tax problems at greater length. I do want to say that I think there is nothing

more important to the equipment situation than some adjustment in depreciation that will give the railroads enough money to purchase new equipment. The cars that we are retiring today originally cost on an average around $2,500 to take a round figure. New cars today cost on an average of about $9,500. That means the depreciation is far from adequate to buy new cars. That $7,000 of new money on an average has to be found for each car to be purchased, and to attain that amount of new money a railroad would have to earn somewhere around $15,000 per car before taxes. But I think some adjustment in depreciation is the most important thing in the acquisition and building up of the railroad equipment.

Mr. Chairman, may I observe in closing that not one of these recommendations is intended to confer, nor would any confer, any unfair advantage upon railroads in the competition for traffic with other modes of transportation. Not one asks anything for railroads that other forms of transportation either do not already have or could be given in a new enactment. Not one would require an appropriation from Congress. Not one is anything other than in full harmony and keeping with both the spirit and the letter of our cherished system of free enterprise.

Rather all these recommendations seek is to establish conditions of fair and equal opportunity for all competitors in the field of transportation and to remove artificial handicaps and barriers that have thwarted, and continue to thwart, a basic industry in its effort to stay healthy and strong in the public interest.

Given neither favoritism, nor charity, nor handouts—given nothing more than equal treatment from Government and a fair chance to compete for business on the same terms as other carriers—railroads not only will provide for their own future, but will also give America its greatest defense bargain. They will regain rugged health by putting to full use their splendid natural capabilities in healthy competition for business, and in so doing they will provide the finest, most economical transportation this Nation has ever seen, both for defense and a vigorous, expanding economy.

Summary of Government expenditures for airways, airports, domestic airmail subsidy, highways, and waterways [1]

[Including waterways inland and intracoastal and Great Lakes and coastal harbors]

Prior to—	Federal	State and local	Total
1955	$20,168,024,251	[2] $81,091,690,909	[2] $101,259,715,160
1955	1,038,722,096	[3] 6,577,000,000	[3] 7,615,722,096
1956	1,185,167,129	[3] 7,365,000,000	[3] 8,550,167,129
1957	1,893,423,115	[3] 7,704,000,000	[3] 9,597,423,115
1958	2,894,241,237	[3] 7,652,000,000	[3] 10,546,241,237
1959 (estimate)	3,666,437,000	[3] 8,075,000,000	[3] 11,741,437,000
Total	30,846,014,828	[4] 118,464,690,909	[4] 149,310,705,737

[1] This table summarizes expenditures for each type of facility as shown in the attached tabulations with notes and sources of information.
[2] Does not include State and local expenditures for waterways as they are not available.
[3] Does not include State and local expenditures for airports and waterways as they are not available.
[4] Does not include State and local expenditures for airports after 1954 and does not include any State and local expenditures for waterways as they are not available.

Airways [1]

	Federal	State and local	Total
Expenditures prior to 1955	$973, 784, 160	None	$973, 784, 160
1955	99, 110, 287	do	99, 110, 287
1956	108, 285, 119	do	108, 285, 119
1957	193, 641, 640	do	193, 641, 640
1958	283, 040, 451	do	283, 040, 451
1959 (estimate)	330, 980, 000	do	330, 980, 000
Total	1, 988, 841, 657	do	1, 988, 841, 657

[1] Obligations for establishment, maintenance, and operation of the Federal airways system, years 1925 to date. Does not include costs of military facilities and funds transferred to the Civil Aeronautics Administration, the amounts of which could not be ascertained. Relatively minor expenditures for airways in the U.S. Territories and possessions, not separately available, are included in the amounts shown. Expenditures for an accelerated research and development program for improving the national system of aviation facilities, and for flight operations and airworthiness (inspections and certifications of aircraft, airmen, and operators of aircraft) are not included. Obligations for these 2 categories in 1959 were $2,800,000 and $23,200,000, respectively.

Source: Annual budgets of the U.S. Government; for years 1925 and 1926—annual reports of the Postmaster General.

Airports

	Federal		State and local [3]	Total [3]
	Grants in aid [1]	Administration costs		
Expenditures prior to 1955	$1, 949, 903, 739	[2] $6, 405, 352	$2, 043, 690, 909	$4, 000, 000, 000
1955	19, 698, 475	2, 132, 334	(4)	(4)
1956	18, 182, 820	2, 680, 190	(4)	(4)
1957	44, 770, 825	3, 330, 650	(4)	(4)
1958	70, 307, 595	4, 012, 191	(4)	(4)
1959 (estimated)	63, 000, 000	4, 961, 000	(4)	(4)
Total	2, 165, 863, 454	23, 521, 717	(4)	(4)

[1] Federal expenditures for civil airports prior to 1955 include a military contribution of $1 billion as estimated by Under Secretary of Commerce Rothschild in April 1958, other Federal expenditures for civil airports under the Civil Works Administration, Federal Emergency Relief Administration, Public Works Administration, Works Progress Administration, the Public Roads Administration, and the Civil Aeronautics Administration prior to the Federal Airport Act of 1946, and grant agreements under the act through 1954. Grant agreements under the act are also shown for the years 1955 through 1958. Grant funds authorized are shown for 1959.

[2] The President's Airport Commission in 1952 estimated the acquisition cost of all U.S. civil airports, with their ground establishments, to be in the vicinity of $4,000,000,000.

[3] Costs of administering the airport program for years 1947 through 1954.

[4] Not available.

Source: "The National Airport Program," S. Doc. 95, 83d Cong., 2d sess., p. 34, hearings before the subcommittee of the Committee on Interstate and Foreign Commerce on bills to amend the Federal Airport Act, U.S. Senate, Apr. 14–17, 1958, p. 301; budgets of the U.S. Government; and "The Airport and Its Neighbors," President's Airport Commission, May 16, 1952, p. 35.

Domestic airmail subsidy [1]

Expenditures	Federal	State and local	Total
Prior to 1955	$351, 531, 000	None	$351, 531, 000
1955	28, 281, 000	None	28, 281, 000
1956	29, 219, 000	None	29, 219, 000
1957	34, 480, 000	None	34, 480, 000
1958	40, 381, 000	None	40, 381, 000
1959 (estimated)	42, 796, 000	None	42, 796, 000
Total	526, 688, 000	None	526, 688, 000

[1] Includes domestic trunk, local service, helicopter airlines service, and mail-cargo carriers. Subsidy to the territorial carriers, a small part of the total subsidy, is contained in the figure prior to 1955. Subsidies to international air carriers are not included.

Source: 1939 through 1951, Civil Aeronautics Board, "Administrative Separation of Subsidy From Total Mail Payments to Domestic Air Carriers." September 1951, p. 5; 1952–59, CAB, "Service Mail Pay and Subsidy for U.S. Certificated Air Carriers, October 1958," table 2.

Highways—Expenditures

	Federal [1]	State and local	Total
1921 [2] to 1955	$12,972,000,000	$79,048,000,000	$92,020,000,000
1955	779,000,000	6,577,000,000	7,356,000,000
1956	882,000,000	7,365,000,000	8,247,000,000
1957	1,426,000,000	7,704,000,000	9,130,000,000
1958	2,275,000,000	7,652,000,000	9,927,000,000
1959 (estimated)	2,985,000,000	8,075,000,000	11,060,000,000
Total	21,319,000,000	116,421,000,000	137,740,000,000

[1] Includes $4,374,000,000 expended through work relief during 1933–42.
[2] Records not available prior to 1921.

Source: U.S. Department of Commerce, Bureau of Public Roads, "Highway Statistics Summary to 1955," tables HF–201 and HF–202 for years through 1947; "Highway Finance, 1948–57, April 1958"; tables HF–1 and HF–2 for years through 1955, and Bureau of Public Roads release BPR 59–1 dated Jan. 20, 1959, tables HF–1 and HF–2 for years 1956 through 1959.

Waterways [1]

Expenditures	Federal	State and local	Total
Prior to 1955	$3,914,400,000	[2]	[2]
1955	110,500,000	[2]	[2]
1956	144,800,000	[2]	[2]
1957	191,200,000	[2]	[2]
1958	221,500,000	[2]	[2]
1959 (estimated)	239,700,000	[2]	[2]
Total	4,822,100,000	[2]	[2]

[1] Includes inland waterways, intracoastal waterways, Great Lakes, and coastal harbors.
[2] Not available.

Source: Hearings before the subcommittee of the Committee on Public Works, U.S. Senate, 84th Cong., 1st sess., on S. 414, S. 524, and S. 1069, Apr. 18–21, 1955, table II, p. 30; and Budgets of the U.S. Government.

Inland and Intracoastal Waterways [1]

	Federal	State and local	Total
Expenditures prior to 1955	$2,095,900,000	[2]	[2]
1955	57,400,000	[2]	[2]
1956	77,400,000	[2]	[2]
1957	102,300,000	[2]	[2]
1958	118,500,000	[2]	[2]
1959 (estimated)	128,300,000	[2]	[2]
Total	2,579,800,000	[2]	[2]

[1] Does not include Great Lakes and coastal harbors.
[2] Not available.

Source: Hearings before the subcommittee of the Committee on Public Works, U.S. Senate, 84th Cong., 1st sess., on S. 414, S. 524, and S. 1059, Apr. 18–21, 1955, table II, p. 30; and Budgets of the U.S. Government.

Mr. LOOMIS. That completes my direct statement.

Mr. KILDAY. Thank you, Mr. Loomis, for your statement. It will be included in the record in its entirety. We appreciate your coming. You have been most helpful. Mr. Van Zandt.

Mr. VAN ZANDT. Mr. Loomis, the Department of Commerce introduced certain statistics regarding equipment ownership and so forth for various periods including figures for 1957.

Do you have more current information that you could give the committee?

Mr. LOOMIS. Yes, when I read the statement of the Department of Commerce, I had our people give us the most up-to-date figures

that we have and I will be glad to furnish this information for the record.

As of July 1, 1959, class I railroads of the United States owned 1,775,261 freight cars—including railroad-owned and controlled refrigerator cars—and 29,617 locomotive units. As of January 1, 1959, class I railroad ownership of passenger-train cars, including those owned by the Pullman Co., totaled 31,921—of which 18,633 were equipped to carry passengers. Corresponding figures as of January 1, 1946, were 1,846,257 freight cars; 43,520 locomotive units; and 46,863 passenger-train cars—of which 30,532 were for carrying passengers. All locomotives owned as of July 1, 1959, were diesel except 1,002 steam, 550 electric, and 33 gas turbine. On January 1, 1946, only 3,816 were diesel and 38,853 were steam.

Employees of class I railroads as of June 1959 totaled 850,250. On January 1, 1946, railroad employment totaled 1,420,266.

Class I railroads numbering 113 in 1958 represented about 95 percent of all railroad mileage in the United States and accounted for about the same percentage of gross railroad operating revenue. They had a combined net investment of $27.5 billion in carrier property and operated total mileage of 221,712. Class I railroad net income after taxes and interest on long-term debt totaled $602 million in 1958, or 2.2 percent on net investment. Their operating ratio of expenses to revenues was 78.9 percent.

Mr. VAN ZANDT. Mr. Loomis, you testified that the railroads handled over 90 percent of all military freight and over 97 percent of all organized military travel during World War II. I think these figures are most significant, but do you know what percent of military freight and passenger travel are handled by rail today?

Mr. LOOMIS. The only information I have on this subject is that in the statement of General Morris' testimony as released last week which shows that the railroads handled in 1957 only 40 percent of the military passenger-miles and 53 percent of the military freight ton-miles.

Mr. VAN ZANDT. How does this compare with the national proportion for railroads—that is, what percent of the national passenger business and national freight business is handled by the railroads?

Mr. LOOMIS. As shown by General Morris' figures, the Department of Defense employes the railroads for the movement of 40 percent of its military passenger-miles and the airlines for 49 percent of its military passenger-miles. This compares with overall national figures of 32 percent of all commercial passenger-miles handled by rail and 35 percent by air. Thus, it is clear that the Department of Defense favors air transportation as compared with rail transportation. However, the real significance of these figures is revealed when they are compared with what the rails provided during World War II and related to the job we would have to do in another emergency, particularly after so many of the larger civilian aircraft would be taken over by the military under the CRAF mobilization plan.

As to the distribution of freight traffic, the chart accompanying General Morris' testimony also serves to bring out the great variation between peacetime use of rail transportation by Defense and the requirements of Defense for rail transportation in an emergency. I have testified that in World War II 90 percent of all military freight moved by rail and I testified as to many basic reasons why rail transportation is so essential in an emergency.

The chart in General Morris' testimony shows that Defense routed 53 percent of freight ton-miles by rail and 32 percent by truck in 1957. It also shows that total national traffic moved 46 percent by rail and 19 percent by truck.

However, this chart does not show what is even more important. It does not show that of the national commercial traffic moving by rail and common-contract motor carrier combined in 1957, rails handled 88.2 percent and motor carriers 11.8 percent. In contrast, the Department of Defense moved only 62.3 percent by rail and 37.7 percent by motor carrier.

To sum up, during World War II military freight was 90 percent by rail; in 1957 only 53 percent. Moreover, as I have pointed out, of national commercial traffic moved in 1957 by rail and motor carrier combined, rails handled 88.2 percent compared with only 62.3 percent of the Defense traffic.

This committee should endorse and broaden to include freight traffic the recommendations of the ICC when it said:

> We urge the Department of Defense in selecting the means of transporting its military personnel to place appropriate emphasis on the means upon which it will rely heavily in time of emergency.

Mr. VAN ZANDT. That is all, Mr. Chairman.

Mr. KILDAY. Thank you, Mr. Loomis.

Our next witness is Mr. John M. Budd, president of the Great Northern Railway.

Mr. Budd, we will be glad to have your statement in any manner in which you desire to deliver it.

Mr. BUDD. Mr. Chairman, it is my purpose, for brevity's sake, to depart from the prepared statement in the early part of the presentation and summarize very briefly some of the things that Mr. Loomis has covered.

Mr. KILDAY. Without objection, your entire statement will be included in the record at this point, and we will be glad to get what summary you desire to give.

STATEMENT OF JOHN M. BUDD, PRESIDENT, GREAT NORTHERN RAILWAY

Mr. Chairman and members of the subcommittee, my name is John M. Budd. I am president of Great Northern Railway Co. and have my office at St. Paul, Minn.

My appearance here today is on behalf of the railroads of the western district. The western district comprises those States in the continental United States west of the Mississippi River excluding Alaska and including the entire States of Louisiana and Minnesota and also the States of Illinois and Wisconsin and the upper peninsula of Michigan.

I believe your inquiry is timely and of extreme importance. The matters into which you have been inquiring have been of concern to me and to other railroad people. Mr. Loomis in his presentation has put emphasis on the unique advantages that railroads have in handling traffic, particularly in an emergency, the fact that they use a minimum of manpower and of critical materials, such as fuel. He has also pointed out the capabilities of expansion with a minimum of essential materials and manpower, and has pointed out the probable greater increase that we may have to face in a future emergency than we have in the past.

The reasons, of course, are the greater percentage of traffic that is now being handled by other forms of transportation, the increased population that we are serving, and the increased productivity that we have in this country, the greater capacity for productivity.

He has also pointed out the flexibility of railroad service in rerouting traffic around trouble points and the self-reliance of the railroads in making repairs when there is damage to facilities. He has further pointed out the fact that there is less reserve capital now for handling expanded traffic than there was at the beginning of World War II.

I would like to add to what he said, that my experience indicates that the railroads in this very stiff competition cannot afford to provide the large excess reserve of capacity. We just have been fighting to hold our own and have had to skimp and provide service with the very least of facilities. We have made extensive improvements in our plants and have made very sizable expenditures. But those expenditures have been for the purpose of increasing efficiency more than increasing capacity. They have been for the purpose of making more intense use of our facilities.

Taking the western lines, comparing them 1939 to 1958, or at present, our plant is about the same. The mileage has decreased slightly, about 5 percent. The number of cars, freight cars owned, is up some. The capacity of each car is greater, so that the total capacity of the fleet is larger than it was. There has been a very decided shift in locomotives. We have substituted diesel locomotives for steam. The tractive effort remains about the same for the fleet of locomotives, but the characteristics of the diesel permit us to get greater utilization of the units. The effectiveness of the fleet even with smaller numbers is about the same or greater than it was at the beginning of World War II.

During that time our traffic has about doubled, measured in net ton-miles, revenue net ton-miles. The doubling of traffic with about the same size plant means that we are making a more intense use of the plant, and that we have less reserve capacity. There are several measures that indicate this increased intensity of use of the facilities. In meeting competitive situations we have increased our average train speeds by about 20 percent, but at the same time, even with that increase in speed, our average trainload has increased about 75 percent. There are other indicators which show the improved use of cars and plant in general.

Mr. Loomis' statement has, in addition, pointed out the inadequacies of the railroads to meet an emergency condition. He has pointed out two reasons: 1, the Government policy of financial aid and other assistance to competitors; and, 2, the fact that the railroads are being artificially restricted from their efforts to compete.

I would like to talk about two aspects of these Government policies. The first is the agricultural commodity exemptions for trucks; and second is adequate user charges for any transport agency that uses Government facilities.

I would like to repeat before doing so the timeliness of these hearings. I believe they are extremely important and that they will open up some needed cooperative studies between the private transportation agencies and Government agencies. First, to determine the needs not only for the military traffic but also for the important civilian traffic, which would include a lot of traffic in support of military necessities, such as the movement of raw materials or partially manufactured materials.

Second, all the factors that bear on meeting these transportation necessities could be determined and the best ways of meeting the requirements could be found.

One of the things that is needed for making quick use of the facilities of the railroads is a prompt issuance of compulsory orders for more efficient use of the facility. Our experience in the First and Second World Wars indicated that we needed compulsory orders for such thing as heaviest possible loading of cars, the quick release of cars when they are loaded or unloaded, and to the extent possible, the direct routing of shipments, rather than by circuitous routes.

There are some emergency orders that are ready to go into effect, and those would meet just the most extreme emergencies.

I am grateful for this opportunity to speak to you about our industry and the state of its preparedness to perform what may be required in a national emergency. I can think of no subject which demands more careful or immediate attention. Maj. Gen. Charles G. Holle, Deputy Chief of Engineers, U.S. Army, in an address in March of 1956, referring to the vast scope and variety of service demanded by the Armed Forces, said:

"* * * in case of national disaster, as in the case of war, the railroads move up from the 'necessary' category to the 'vital' " (quoted in "Rail Transport and the Winning of Wars," March 19, 1956, by Gen. James A. Van Fleet, U.S. Army (retired), at p. 5).

The railroads' capacity in an emergency is not susceptible to simple calculation. Those in the Defense Department and in other Government agencies who are concerned with logistics should take a careful look at the manpower and material requirements of the different modes of transportation before determining what job each agency is to be assigned in the next emergency.

It is my opinion that the railroads will have to play an important and essential role in any wartime emergency. Government officers should also determine what civilian services can and should be curtailed or eliminated as nonessential and estimate what resources, manpower, and materials will be available to carry out the essential transportation tasks for both military and civilian demands. The carriers, themselves, are best suited to determine the facilities and manpower needed to do the job once they know what that job will be.

Determination of the railroad plant and the rolling stock needed for emergency transportation should be made by intensive study on a cooperative basis by the Government and the railroad industry. Such a study was made in 1955 by the Office of Defense Mobilization Consultants Committee on Railroad Equipment headed by Capt. Granville Conway and herein referred to as the Conway Committee, but the study must now be regarded as obsolete. The following excerpt from the 72d Annual Report of the Interstate Commerce Commission to the Congress, dated December 1, 1958, and covering the fiscal year ended June 30, 1958 (at pp. 117–118), illustrates the rapidity with which changes occur in concepts of transportation needs in a national emergency:

"Planning for mobilization of the Nation's domestic transportation, storage, and port industries during the year was marked by changes in emphasis and direction. Overall guidance provided by the executive branch looked more and more to the serious possibilities of mass nuclear attack on the Nation with implications of radioactive fallout extending across the land and isolating large areas of the country.

"These assumptions tended to compress the time phasing of plans and to give new urgency to action measures. * * *"

Since the transportation resources of the Nation likewise undergo continuous changes, a truly effective plan for defense transport requires the expenditure of time and energy on almost a continuous basis by those in the Government and those in the transportation industry working together.

In the absence of a blueprint for the job which our industry must accomplish, the best I can do today is to tell you just how I think we will be able to perform in the light of two factors from the past and present with which I am acquainted: (1) the job we did in World War II, which I shall touch on only briefly, since it is being adequately covered by Mr. Loomis and other railroad witnesses; and (2) the state of our plant at that time in relation to the then current transportation demands, as compared with our plant now in relation to present and prospective transportation demands. After I relate my conclusions, which seem inescapable, I hope to have the opportunity of suggesting some remedies which are within your power and which if applied promptly should, in my opinion, improve immeasurably our performance in the next great emergency.

Mr. Loomis has mentioned the spectacular achievements of the railroads during the last great war when the Nation relied on the rails to an extraordinary degree and much more heavily than upon any other form of transport. The efficiency and elasticity which is possible in train operations, comprising one power unit pulling many vehicles with a minimum of friction over steel rails, has made rail transportation paramount in husbanding manpower and materials. And in periods of emergency when there are inevitable shortages of both men and materials the Nation's dependence upon the railroads, as the great economizer of both, increases proportionately. In the next war, as in the military conflicts of the last century down to and including Korea, we may expect, therefore, a tremendously increased reliance on the mass transportation which the railroads can provide most effectively, with the greatest flexibility, and with the most economic use of the Nation's resources.

In terms of overall size, the pre-World War II plant of the western district railroads was not greatly different from what it is today. The western roads now operate about 125,000 miles of road, which is slightly less than their 1939 mileage; their total track-miles are also somewhat less; the total number of their freight cars has increased about 10 percent, and the aggregate capacity of these cars has shown a somewhat greater increase. Total tractive effort of railroad locomotive power has also increased slightly.

The significant difference in the railroad properties of today as compared with those of two decades ago is the result of an intensive drive which has extended through the entire period since World War II to modernize operations and increase efficiency.

After World War I, the railroads borrowed heavily to rehabilitate facilities that had been worn out carrying wartime traffic. When the depression of the thirties arrived, many roads had not been able to put themselves in condition, even during

the prosperous twenties, to remain solvent during the period of decreased earnings. A minimum of replacements was made in this period because funds were hard to obtain and there were more facilities than were actually being used. Railroads were in fact criticized at that time for having overexpanded.

Then came the Second World War and the tremendous burden it placed on the railroad industry. Again manpower and materials were not available for proper maintenance. It was some time after the war before the railroads could obtain essentials needed to replace the excess wear of heavy World War II traffic. In this period of accelerated inflation the cost of replacements mounted rapidly, and modest funds accumulated during World War II were depleted.

Nevertheless, the maintenance, reconstruction, and modernization program carried through since World War II has been both impressive and effective. There has been an almost 100-percent conversion from steam to diesel power, accompanied by a corresponding changeover in locomotive shops, an extensive mechanization of maintenance equipment and facilities, construction of numerous pushbutton yards, widespread use of automatic train control, electronic computers, and radically changed freight- and passenger-carrying equipment. This was accomplished only by heavy expenditures for capital improvements which, for the western roads, have approximated $500 million annually in the past 10 years. Such extensive investments, as I have said, did not enlarge the railroads' physical plant; they simply replaced it with one much more efficient and one better geared to speedy operation to meet stiff competition. The funds required necessarily came out of the railroads' current income after taxes or from borrowings against future income. Since the net income of the railroads comes from revenues paid by their customers, the shipping and traveling public bears this cost. The measures the railroads took were desperately needed for their survival in this period of rapidly rising operating costs, closely regulated pricing, and subsidized competition.

Since the freight business of the western railroads in terms of revenue net ton-miles has more than doubled since pre-World War II, these roads are now using their physical plants much more intensively than ever before. Time schedules have been shortened, average train speeds have been increased, and yet it has been possible not only to maintain but in fact to increase substantially average train loads. This has been accomplished both by the western district roads and the Nation's railroads as a whole. Standard efficiency indicators for western district railroads show the following impressive increases:

	1939	1958
Net ton-miles per freight car day	543.0	991.0
Car-miles per freight car day	35.6	50.4
Freight train speed, miles per hour	17.8	21.2
Freight train load, gross tons	1,818.0	3,149.0
Average load per freight car, net tons	24.0	30.2
Gross ton-miles per freight train hour	32,190.0	66,273.0

On the Great Northern, for example, since World War II we have reduced the schedule of our westbound transcontinental time freights from Minneapolis to Seattle from 106 hours 25 minutes to 60 hours 30 minutes. Our eastbound transcontinental schedules have been cut from 120½ hours to 78 hours. We have also made substantial reductions in the schedules of all our other principal time freights. At the same time, our system-average train loads have increased. Other railroads have made similar improvements in their schedules and operations.

Another significant change in this period has been a gradual reduction, which has now reached about one-third, in the number of passenger-carrying cars. With the drop in railroad passenger travel and the necessity of keeping our operation economical and efficient, this trend appears likely to continue.

Now what about the capacity of this modern 1959 railroad plant in relation to current and potential emergency demands for transportation compared with the capacity of the plant in 1939 in relation to the demand which it was fulfilling in the peacetime year of 1939 and during World War II?

First and foremost, as has already been pointed out, the railroad plant of today is handling more than twice as much business as it did before World War II. Revenue ton-miles of the class I railroads in the western district increased from 121.9 billion in 1939 to 280.5 billion ton-miles in 1956, which approaches the wartime peak of 306 billion in 1944.

Second, as the efficiency indicators which I have already referred to indicate, the railroad plant is being used much more intensively than ever before. This in and of itself indicates that the margin of excess capacity has been diminishing.

Third, the total transportation business of the Nation has burgeoned even more rapidly than that of the railroads. Total intercity ton-miles have increased from 543.5 billion in 1939 to 1,352.7 billion in 1957, a figure which exceeds by about 24 percent the peak of wartime transportation. Total intercity passenger-miles (exclusive of mileage in private automobiles) have increased from 35 billion in 1939 to 82 billion in 1957.

This sharp rise in transport demand has been but one indicator of the Nation's general economic trend. From 1939 to 1958, that gross national product has increased from $92 billion to over $437 billion, and the President's Economic Report for 1959 predicts a figure of $473 billion for 1959, the annual rate reaching $480 to $485 billion by the fourth quarter. The population of the States of the western district has increased from 51 million in 1939 to an estimated 71 million in 1958, or roughly 39 percent. Motor vehicle registrations have more than doubled.

All of these factors indicate, of course, that in the next emergency, when, as in World War II, the utilization of railroads in preference to other forms of transportation can be expected to be greatly augmented, the potential demands upon the railroads' physical plant will be immensely greater than ever before. (Total intercity ton-miles increased 100 percent from 1939 to 1944, while western district railroad ton-miles increased 154 percent.)

Unfortunately, the plain fact is that the railroads now do not have the capacity to meet that emergency. The present railroad plant is not quite adequate for the peacetime demands of today, to say nothing of the greatly accelerated demands which the next emergency will bring. This is nowhere more clearly demonstrated than in the present freight-car supply situation, which is but a current manifestation of a problem which has plagued the railroad industry for many years and which, as stated in the report on freight-car supply by the Senate Interstate and Foreign Commerce Committee dated June 29, 1959 (Rept. No. 452), "has become progressively worse." The report continues (p. 2):

"* * * It is now a problem of major national importance, not only from the viewpoint of the railroads and their employees, but also from the viewpoint of the Nation's shippers and, indeed, from the viewpoint of the national defense. This stark fact is universally recognized, unchallenged, and supported by the testimony offered before this committee.

"Total freight-car ownership by class I railroads, including railroad owned and controlled refrigerator cars, has decreased substantially over the years. * * *

* * * * * * *

"Unfortunately, the decline in total freight-car ownership, and the alarming increase in the number of bad-order or unserviceable cars, has been accompanied by a substantial decrease in the number of freight cars on order. Beginning with 1956, the figures are as follows:

Jan. 1, 1956	139,879
Jan. 1, 1957	107,157
Jan. 1, 1958	59,388
Jan. 1, 1959	30,922

* * * * * * *

"* * * testimony before this committee, referred to a study which indicated a need for 1,935,500 freight cars in 1956, and it is obvious that the existing fleet of 1,707,280 cars, as of May 1, 1959, is inadequate to meet the needs of commerce and the national defense."

In 1955, when the railroads cooperated in the report of the Conway committee covering defense transportation needs, that committee estimated that as of January 1, 1955, there was a deficit for defense transportation needs of 320,418 freight cars. During that year, however, the revenue net ton-miles of the Nation's railroads increased over 13 percent above the recession year of 1954. This circumstance, together with the fact that cars ordered after December 31, 1955, would no longer be subject to rapid amortization, resulted in a tremendous increase in car orders during the year.

Orders placed in November, 1955, for example, were greater than in any 1 month in the Nation's history. The Conway committee was discharged in 1956 when the car builders' capacity was fully taken up for some time to come.

Since 1956, however, car orders have fallen off and the freight car ownership of the Nation's class I railroads, exclusive of railroad owned or controlled refrig-

erator cars, has decreased from 1,735,553 as of January 1, 1955, to 1,702,896, as of June 1, 1959, or by about 33,000. But the country's transportation demands, as measured by total intercity ton-miles, were greater in 1957 than in 1955, and with the expanding economy can be expected to increase. Moreover, while the Conway committee contemplated that the freight car deficit could be at least partially made up during the first 3 years of mobilization, the fact that more recent concepts of defense transportation tend "to compress the time phasing of plans and to give new urgency to action measures," as the latest Interstate Commerce Commission report to the Congress indicates, emphasizes the gravity of the present shortage.

So far as passenger equipment is concerned, the following appears from the 1955 report above referred to:

"REQUIREMENTS FOR PASSENGER CARS

"The committee believes that 4,500 additional passenger cars will be required to care for organized military personnel movements. It desired to call attention to a civilian passenger traffic situation which will be far more difficult than in World War II. It is expected that the vast growth of intercity passenger travel by private automobile will be curtailed by gasoline rationing even more seriously than in World War II. Intercity passenger movement by commercial carriers is today about double the 1940 volume, but private automobile travel has somewhat more than doubled and stands today at more than seven times the volume by all commercial carriers."

Passenger train cars of the class I western lines have declined from 11,507 on January 1, 1955, to 9,765 on January 1, 1959. The total passenger cars of the class I railroads of the United States have likewise been reduced. The 1,500 Pullman cars leased and stored by the Defense Department will, of course, fall far short of fulfilling demands for organized military movements, and the military therefore will have first call upon the remaining supply of the railroads, which is rapidly dwindling in view of declining peacetime demands for rail travel.

The railroad passenger car fleet is obviously critically inadequate to meet emergency requirements. This inadequacy may be expected to become even more critically acute. Mr. Loomis has referred to the Interstate Commerce Commission's recently completed passenger train deficit investigation which outlines the principal causes of the continuing loss of railroad passenger traffic and which also contains recommendations to the Congress, the executive departments of the Federal Government and to State and local governments, as well as to the railroads, to alleviate the problem. It will take time and, as the Commission states, "responsible efforts" by all of these agencies to lessen or reverse the present trend.

In its 1955 study the Conway committee found that there was a deficit of the locomotive power needed for an emergency but that such deficit would be solvable by the granting, from Government agencies, of manpower and materials to implement production. Since then the railroads have completed their dieselization program. However, the bulk of the diesel fleet is 4 years older now, and with each year an increasing number of units will be reaching an age greater than 15 years. The Great Northern, for example, is faced with rebuilding or replacing most of its diesels within the next decade.

Just as freight and passenger cars are not static, neither are locomotives. The roads with highly seasonal traffic are, to the extent possible, meeting their diesel requirements during peak periods by leasing power from roads which, at those particular times, have a surplus. However, this cannot always be worked out satisfactorily and some railroads are being pinched. The railroad industry can handle in peacetime with the diesels on hand, plus a modest increase by purchase, the freight cars which it appears will be available. However, a substantial increase in the freight car supply, accompanied by a step-up in business activity, will require more trains to be operated, and we will need to increase our power proportionately. The present deficiency of funds for acquiring cars will be compounded by the purchase of added locomotives.

In the absence of a study, I am not able to predict the adequacy of fixed property for an emergency. However, there is cause for concern in the shrinkage of track mileage of the Nation's rail system in the last decade. This has been a little less than 5 percent in the West and for the country as a whole. During World War II the direct relationship between the quality of the fixed parts of a railroad and the efficiency of equipment usage was often demonstrated. Inability to utilize cars because of lack of tracks or yards diminishes the overall efficiency of the railroad plant.

What can be done now to remedy the seriously critical inadequacy of the present-day railroad plant, particularly in car supply, to meet emergency requirements?

The first step which is required—commencement of a study and investigation—you gentlemen have already taken. These timely committee hearings should bring from the executive department of the Federal Government its best estimate of wartime traffic requirements, both military and civilian. The representatives of the transportation industry, upon study of these requirements and on inventory of their resources, not only will be able to answer with some degree of definitiveness your questions about their ability to meet these needs but they can also make specific recommendations as to what steps need now to be taken to conserve transportation equipment pending the time necessary to complete a longer range program. For example, a cooperative study will indicate whether stockpiling of railway equipment, parts and critical materials should be undertaken at this time and, if so, to what extent and in what manner.

There is always a hidden reserve available in times of war that is not available in peacetimes when competitive carriers must sacrifice efficiency to favor their customers so as to attract as much as possible of the available tonnage. It is not a simple task to wean shippers away from these peacetime practices and prompt action to effect such changes upon the development of an emergency is essential. As an example of the hidden reserve that was put to use in World War II, the net ton-miles per car-day for the class I railroads jumped from 531 in 1939 to 1,058 in 1944. In 1958, this figure was 802.

Included in the investigation, therefore, should be a calculation of the effect which special car service orders and other wartime directives will have in increasing the railroads' effective capacity. These orders and directives should provide for heavier loading of cars, for shorter loading and unloading times, and for eliminating to the extent practicable circuitous routing of traffic. There should also be included consideration of whether wartime traffic will, as in the case of World War II, provide a more balanced movement than prevails in peacetime. The percentage of the loaded car-miles to the total car-miles was substantially greater during the war period than during peacetime either before or after the war.

I also believe that as a part of this investigation, policies of the executive agencies of our Government should be carefully reviewed, having in mind the tendency in some quarters to put rail facilities on a standby basis. A number of these policies, and their results, are reviewed in the Commission's recently completed railroad passenger train deficit investigation, ICC docket 31954. Lack of peacetime use of properties essential to defense can contribute to their reduction to a point where national defense is endangered. And this applies particularly to our great common carrier rail system which must be kept in a healthy condition if the rails are to fulfill their obligations as laid down in the national transportation policy.

Among the policies which have come to my own attention particularly are those of the Post Office Department, which has not hesitated to divert the mail traffic from the rails to the trucks whenever considerations of price or service have appeared to it, at the moment, to dictate that course. In 1952, for example, the Post Office Department diverted from rail to motor carriage the through mail business between Portland and Seattle, leaving the rails to handle the local business, notwithstanding the fact that there were four passenger trains daily in each direction between these cities, leaving in the morning, at noon, in the afternoon, and at night, and that only one pair of these trains made local stops. This cost the rails over $600,000 a year.

Since 1954, first-class mail has been turned over by the Post Office Department to the airlines, on an experimental basis, of a space if, as, and when available basis, although the airlines, unlike the rails, have no obligation to carry this mail at all. This, of course, puts the rails on a standby basis—for use by the Post Office Department when the airlines do not have sufficient capacity.

The Postmaster General, in a letter to Hon. Sam Rayburn, Speaker of the House, dated the 16th of this month, has proposed legislation authorizing the Postmaster General to handle any and all classes of mail by air carriers. He complains that the regulated air carriers are objecting to the 1954 experimental plan of handling mail, and expresses his desire to obtain legislation so as to be able to contract with the airlines on a firm basis. S. 2402, introduced on July 16, would accomplish these objectives of the Postmaster General.

These matters are of concern to your committee and the Nation because, among other things, the continuance or discontinuance of rail passenger service right now and the continued use or the discarding of rail passenger equipment as of

today, will have a bearing on whether our industry will be able, in a future emergency, to take care of vitally necessary military and civilian travel. Passenger train revenues come from three principal sources: passengers, mail, and express. While each contributes importantly toward meeting expenses, overall operating results are in the red. Steps have been taken recently by management to reorganize the handling of express. When the mail is removed and given to a competitor, the train from which it is taken begins either to lose money or to lose more money. Railroad management then has no sensible alternative except to apply for its discontinuance. An unprofitable passenger train is a burden upon the shipping public, which in the end pays the revenues out of which rail service is provided. In summary, the Government won't have railroad passenger service for national defense if the Government in peacetime follows a short-range policy of refusing to use the facilities of the rails with the result that the facilities are abandoned.

The Department of Defense has, we believe, adopted a short-range policy in failing to encourage railroads to build trackage to serve major military installations. During the past few years large airbases have been built near our line in the vicinity of Minot, N. Dak., and Glasgow, Mont. The bases were not located adjacent to any rail facilities. The military authorities refused to assure our railroad any traffic in the event we constructed branch lines to serve these bases. Largely on the assurance of the private contractors engaged in construction that the railroad would be used for inbound construction material, my company constructed lines to serve these bases. With the bases constructed and in operation the military authorities follow a rigid policy of allocating to motor carriers half of the tonnage which can move to the base at shipping costs equal to those of rail transportation. This policy does not give consideration to the vital need which the Military Establishment will have for rail service to these bases in the event of an emergency. Should we be unable to sustain the expense of operating these branch lines on the minimum traffic the military is willing to parcel out, we will have no alternative but to abandon the lines.

These practices seem to be illustrative of the continuing policy of a number of Government agencies of favoring the competitors of the self-supporting common carrier railroads. Disuse of common carrier rail facilities at the present time can lead only to their deterioration, which in turn will result in governmental operation or abandonment. This is a stark, unavoidable fact which any long-range defense planning must take into consideration.

But, valuable and helpful as a study and review of the policies of Federal agencies at this time will be, particularly if followed by prompt action, the critical inadequacy of the railroad plant cannot be remedied by such a course alone.

The fundamental cause of the present inadequacy of rail transport facilities to meet the pressing needs which the next emergency will bring forth is the railroad industry's critical lack of funds. Though this condition may seem chronic—for it has long continued—it can be cured. In order to administer the remedy, one must first appreciate why the present situation has arisen. And to understand this, it is necessary, in turn, to keep in mind constantly one great and controlling distinction between the railroads and other transportation agencies.

The railroad industry in the United States performs a common carrier service which is unparalleled. A network of privately owned companies provides transportation between almost any two points in this country for almost any commodity in practically any quantity. Also, it provides an extensive service for passengers, mail, and express. This service is available to anyone at prices which are on file publicly.

Each of the other regulated transport agencies, which have expanded rapidly in the last 20 years, provides a selective service—waterlines principally in the movement of bulk traffic between ports, trucklines primarily in the field of high-rated traffic between those localities to and from which they have obtained certificates to operate their vehicles, and pipelines in the handling of gas and oil. All of these specialized competitors except the pipelines make heavy use of the public ways. They are now handling an ever-increasing share of the Nation's total transportation business, while the common carrier railroads are handling a diminishing proportion thereof.

Railroads, with their great elasticity of operation, achieve their greatest efficiency and economy on volume business. In fact, their heavy investments in fixed property require volume if these facilities are to continue to be maintained. Loss of volume results in the dividing up of overhead among a smaller number of traffic units and consequent higher costs for the traffic which remains on the rails. Up to the maximum capacity of the railroad, each traffic unit which is added and

contributes something above its direct out-of-pocket costs helps to reduce the overhead which the remainder must bear. On the other hand, those transport agencies which utilize the public highways, with a much smaller relative investment in fixed properties, can pick and choose smaller quantities of traffic, so long as such quantities will utilize the mobile equipment they own, and pay a charge which makes a particular movement profitable. Hence, they aim, not at overall volume at all but at traffic which will provide the most revenue for a particular trip or trips. This has a tendency to cause diversion of the most attractive business away from the rails, leaving them with the rest, which, as common carriers, they are bound to handle without discrimination for all who seek their service.

In the face of the trend toward specialized transport agencies, the rails have been able to hold only a declining proportion of the Nation's peacetime business, much of it low-rated traffic not attractive to competitors. With increased labor costs and rising material prices, net earnings of the rails have trended downward.

Some roads have done better than others. In each region there are segments in fairly good condition as well as segments in fairly poor condition. But overall the situation is discouraging.

Neither the class I railroads of the United States nor of the western district have been able to earn a return on net investment in excess of 4.63 percent in any year since the close of World War II. In most years their return has been under 4 percent. Yet this period has been one of exceptional prosperity for the country generally. The April 1959 monthly letter of the First National City Bank of New York shows that in terms of return on net assets the railroads in 1957 ranked 63d in a list of 65 industry groups and that in 1958 the railroad industry dropped to 65th, or bottom, position. Obviously these meager railroad earnings have not been enough to provide funds for both the extensive capital improvement program which the railroads found it necessary to pursue in the postwar period, for a modest return to investors, and for building up a fleet of cars at spiraling prices adequate not only for peacetime needs but also for national defense. Yet the record is also clear that if this great industry had the requisite funds it would use them to buy cars, both to help itself and to contribute toward the national security. The record 1955 freight car orders which suggested discharge of the Conway Committee show what the railroads want to do, and what they will do under favorable circumstances.

What can be done, fairly and equitably, to enable this privately owned industry to obtain sufficient revenues? There are many things that can be done, all of them aimed at equality of treatment and equality of opportunity to do business.

The most important step which could possibly be taken, in my opinion, to enable the railroads of this country to increase their volume without serious injury to competitive, regulated transportation agencies and so help themselves in regaining health—a step which would also greatly serve the public interest—would be to eliminate that provision of the Interstate Commerce Act which exempts from regulation the transportation of agricultural commodities by motor vehicle. This is of particular concern to the western district railroads, because in 1958 these carriers depended for over one-fifth of their total freight revenues—a sum exceeding $800 million—upon the transportation of those products of agriculture and animals and products which are entirely free from rate regulation when moving in interstate commerce by truck. In that year the Great Northern depended for one-third of its total freight revenue on the transportation of commodities which can now move by truck without regulation. In this age of closely supervised for-hire transportation charges, this important traffic still remains subject to unregulated competition by motor vehicle at undisclosed charges.

The western granger lines provide the only widespread, dependable common carrier transportation service in the vast agricultural region west of the Mississippi capable of moving the Nation's crops to market in an orderly fashion and with reasonable expedition. The Interstate Commerce Commission has taken great care to so regulate the rail transportation charges on grain and grain products, for example, that the great country producing areas are on a closely related basis, transportation conditions considered. Under this structure the price-fixing markets may compete with each other in the various areas of production on a basis which permits these commodities to move freely in several directions. This has built up through the years an efficient marketing system and strengthened and stabilized prices to the farmer. It has helped develop the producing areas of Montana, the Dakotas, Nebraska, Kansas, Oklahoma, Texas, and other States, for example, and grain markets at such points as Minneapolis, Duluth, the Missouri River cities, and Galveston and Houston.

There has, however, been an increasing tendency for motor carriers which haul selected items of lucrative traffic, such as manufactured articles, under regulation from the centers of population into the agricultural regions west of the Mississippi and where trucks are made empty at interior points, to haul back grain or other agricultural products at unpublished prices which undercut the rails. These prices vary widely as between haulers, from community to community and from day to day. They depend largely on the number of trucks available in a given community on a particular day and are in no way related to what another may be charging from a different community in the same general area or to what may be the rail charge from the same community or a community at which no such trucks are available. The truckers' charges are frequently quoted to elevator operators rather than farmers, the farmers having sold their grain to the elevator usually on the basis of the price at the closest primary market less the rail (not truck) freight rate.

The practice described is being followed also not only by motor carriers whose traffic is regulated in one direction but also by those whose traffic is unregulated in both directions. Many of these exempt haulers are not acquainted with their own costs of doing business. A witness representing an association of unregulated truckers testified last year before the Subcommittee on Surface Transportation of the Senate Committee on Interstate and Foreign Commerce:

"We have found that in our area about one-third of the small exempt truckers go out of business a year. Of course, there is always someone to take their place but the turnover has reached a frightening proportion."

And further:

"We truckers have taken from the railroad a substantial part of their exempt commodities. We did this in most cases by hauling for much less than the railroad price and we hung ourselves with our own rope. Most of our operators are practically broke" (hearings before the Subcommittee on Surface Transportation of the Committee on Interstate and Foreign Commerce, U.S. Senate, 85th Cong., 2d sess., on "Problems of Railroads," pt. 2, p. 1005).

We cannot hope to compete for this business even by reducing rates below out-of-pocket truck costs. The diversion of traffic may reach a point where some lines in North Dakota and Montana, which depend almost entirely on the haul of grain, may have to be abandoned. And this is true undoubtedly for many of the railroads to the south of us.

The damage by the unregulated handling of grain by truck is manyfold: it hurts the railroads which must continue to perform service on a standby basis, which is very expensive; it hurts the shippers and receivers because charges paid are unequal and discriminatory. And the truckers have no investments and no responsibility to continue serving an area if more attractive hauls develop in some other territories.

Mr. C. A. Buchanan, executive secretary, National Agricultural Transportation League, an exempt haulers' association, has characterized as follows the situation resulting from the growth of exempt transportation:

"The only people we can see benefiting from this nonregulation are a group of middlemen who control traffic and who are able to pocket rebates, discounts and kickbacks and payments under the table. * * *

"Seldom do we as truckers ever deal with the farmers direct. In fact, we doubt if the farmers themselves ever know what the rates are for the transportation of their traffic to market and care less" (hearings before the Subcommittee on Surface Transportation of the Committee on Interstate and Foreign Commerce, U.S. Senate, 85th Cong., 2d sess., on "Problems of the Railroads," pt. 2, p. 977).

The illustrations I have given with respect to grain could be repeated in regard to apples from the producing areas of Washington which have long moved in volume to the consuming centers of the East only because the rails which have the tracks and terminals at these shipping points publish market-competitive rates which are low enough to move this traffic over 2,000 miles to market. But the truckers, who cannot profitably haul apples these long distances at charges low enough to enable the producer to meet eastern competition, are moving in on the more profitable shorter haul-apple traffic to points in Western States such as California. This reduces rail volume and increases rail costs per unit on the remaining traffic the rails handle.

With respect to potatoes, another important agricultural commodity, the availability of unregulated truck transportation on particular days at towns where trucks unload has handicapped competitive potato shippers at out-of-the-way points and disrupted orderly marketing from wide producing areas which have grown and developed on carefully related rates.

Commissioner Walrath of the Interstate Commerce Commission, speaking to the members of the United Fresh Fruit & Vegetable Association, stated with respect to exempt carriage:

"Among the disturbing features are the effect truck delivery has had upon stability of your markets, and the growing uncertainty whether reliable and adequate transportation will always show up for loading. Not the least of your worries when using exempt trucking is the uncertainty of your transportation costs, which may vary from day to day, shipper to shipper, and market to market, with virtually no control over discrimination and preference except that of supply and demand. Human nature being what it is, the carriers who solicit your produce today (perhaps as a backhaul at low rates) may tomorrow find more attractive traffic—and then require inducement to serve you." (Quoted in the hearings before the subcommittee above referred to, pt. 2, at p. 979.)

Two associations of exempt truckers, as well as representatives of shippers and receivers of agricultural commodities, now support the rails in advocating repeal of the agricultural exemption or its modification as proposed by the Interstate Commerce Commission.

The Interstate Commerce Commission has heretofore advocated its limitation to transportation from the point of production to the point where such commodities first pass out of the actual possession and control of the producer. This limitation would still provide the exemption which many believe was all that Congress originally intended.

If neither repeal nor the Interstate Commerce Commission proposal be accomplished, then I favor extension of the exemption to rail carriers, thus enabling railroads to negotiate for exempt commodities traffic on an equal basis with their highway competitors. I say this even though extension of the exemption to rail carriers would mean a complete breakdown of the regular marketing procedure and chaos in the transportation of agricultural commodities. The situation is rapidly becoming so desperate that it demands rapid and intelligent consideration.

It is a striking paradox that although one of the purposes of the Interstate Commerce Act, as stated in the national transportation policy, is fair and impartial regulation of all modes of transportation subject to the provisions of the act, and another objective is "reasonable charges * * * without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices," the agricultural exemption in the act completely obstructs these purposes with respect to the most important traffic of the western railroads. And because these purposes are so effectively thwarted by unequal regulation, the ultimate and seriously important objective of the national transportation policy—a national transportation system adequate not only for the country's commerce but also to meet the needs of the national defense has not been realized. In my considered judgment, it cannot be realized so long as this discriminatory exemption remains on our statute books.

The exempt hauler also has, through Government policy, another advantage in competing with the railroads—an advantage which is also shared by the regulated motor carriers, the barge lines, and the airlines. All of these for-hire carriers utilize without compensatory charges the public ways essential to their several business enterprises. Each conducts a business directly competing with the railroads, but the railroads alone provide and maintain their own ways. I shall speak next, therefore, on the need for adequate user charges. Our industry feels that such charges are essential likewise to the full development of a transportation system adequate for the Nation's commerce and its defense.

User charges are intended to provide appropriate payment for Government improvements by those who benefit from them, and achievement of that objective is of paramount public importance.

By enactment of the Highway Act of 1956, I feel that the Congress took a long step forward in recognizing the validity of the user charge concept.

In approving U.S. participation in construction of the St. Lawrence Seaway, Congress stipulated that the entire cost of this facility, including construction, operation, maintenance, interest on investment, and an allowance in lieu of taxes, shall be paid by seaway users over a period of 50 years.

The U.S. Senate, under Senate Resolution 29, approved plans for a study of various matters of national transportation policy to be made by its Interstate and Foreign Commerce Committee. Among the matters to be considered by the committee is the area of Federal policy dealing with Government assistance provided the various forms of transportation and the desirability of a system of user charges to be assessed against those using such facilities.

These actions, together with the directive of the Bureau of the Budget in requiring the agencies of the executive branch to study the subject and do what is necessary to effectuate a truly national user charge policy, should go far toward improving the position of the railroad industry. Nevertheless, only a beginning has been made, and any refusal of either Congress or the agencies to give prompt and full effect to this policy will be of critical importance to us, and therefore to the public.

However, there exists an important public interest in user charges quite apart from their effect on the railroads and the importance of the railroads to the Nation. The following fundamental public principles should be kept in mind:

1. Fully compensatory user charges would establish a test for the economic necessity of Federal expenditures. They offer a means of control over existing facilities and will discourage wasteful plans for future projects.

2. Compensatory user charges would remove an enormous burden from the Federal Treasury which is now applied for the special benefit of particular groups and areas.

3. All users of transportation, public or private, would be placed on an equal footing in purchasing transportation services. Individual firms, or groups of companies, which now enjoy subsidized transportation at the expense of the taxpayers and of less fortunately situated competitors would cease to have their unfair advantage.

4. All forms of transportation would compete on equal economic terms.

The imposition of user charges is a subject for consideration not only by the Federal Government but also by other governmental units. The following quotation from the Commission's report in its passenger deficit investigation (ICC 31954, Railroad Passenger Train Deficit, pp. 62–63), dealing with a situation which confronted the Great Northern, is illustrative of the present lack of adequate user charges at the State and local level:

"In Montana and North Dakota cities and counties are permitted to levy special taxes for the support of airports so that the railroads operating in those States can tell exactly how much they are contributing for the financial assistance of their airline competitors. Cut Bank, Mont., population 3,721 in 1950, has an airport covering 1,703 acres which cost $4.3 million, mostly provided by the Federal Government perhaps for military reasons. Through the city and county airport levies the Great Northern in 1956 contributed $2,241 for the support of this airport, and the ad valorem tax of Western Airlines, which serves the airport, was $22.92. There were 587 air passenger loadings at the Cut Bank Airport in 1957, so that the cost to the Great Northern was $3.82 for each of those passengers, compared with a tax cost to Western Airlines of 4 cents per passenger."

The railroads pay out about 10 percent of their gross revenues in some form of taxes. These taxes are devoted entirely to the cost of Federal and State Government, that is, the national defense, public welfare, schools, fire protection, administration, and even the building and maintaining of roads and improving navigation on rivers.

Another 12 percent of their gross revenues goes for the maintenance of the ways and structures over which they operate. In contrast, other transportation agencies pay out considerably less than 10 percent of their revenues in taxes, most of which go into funds dedicated to the construction and maintenance of the public facilities they use.

Railway taxes are paid from the amounts collected from our shippers. If railroad taxes are high in comparison with our competitors, the charges we make to our customers must also be high. The result is we either lose our customers or the customers who remain are penalized.

This sets off a chain reaction which causes, among other things, investors in rail securities to suffer because they are deprived of an adequate return on their investments, and the national defense to be deprived of a strong and vigorous railroad industry because funds are not available for building up an adequate pool of equipment.

We urge the Congress to go forward with legislation implementing the principle that commercial users of Government facilities pay their full fair share of the cost of constructing and maintaining the facilities they use. In considering the imposition of user charges, we feel the Congress should investigate the very limited extent to which other forms of transportation contribute to the general expenses of Government, as well as the meager payments now made for the extensive facilities and services furnished by the Government. We feel the Congress should also have in mind, in fixing user charges, the need for a strong railroad industry as a part of the national defense and that the railroad industry

will be strengthened if it is afforded equal treatment with its competitors in bearing the general tax burden of the Nation and the States.

Mr. Loomis has outlined a number of the other objectives of the railroad industry in the field of Federal, State, and local legislation. I subscribe wholeheartedly to the position which our industry has taken on these subjects.

In concluding, I should like to point out a characteristic of our industry that is outstanding. The American railroads have forces to maintain their own tracks, rights of way and equipment, and to rebuild them in case of damage. When service is interrupted by storms, floods, and slides, they are accustomed to act quickly on their own resources to repair the damage. This is one of the traditional characteristics of good railroading. The railroads operate their own communication systems, by wire, radio, and telephone. They have their own disciplined organizations which go to work in emergencies without dependence on others. This capacity and resourcefulness was proved time and again during the critical months of World War II. The railroads still have this know-how and they are continuing to develop and encourage it in their own organization .

Your committee can encourage and stimulate this tradition of initiative by making recommendations which will assist the industry and at the same time promote the national defense. With equality of opportunity, with fair treatment but no favoritism, the railroads will rejuvenate their industry and insure its ability to meet promptly, effectively, and resourcefully the most exacting transportation demands which an emergency will bring forth and this will be done with a minimum of manpower and material.

Mr. KILDAY. Thank you, Mr. Budd. We appreciate your statement.

Mr. COHELAN. Mr. Budd, there has been testimony that has come before the committee on the general subject of rolling stock and you made reference in your remarks to excess or unused capacity that you have at the present time.

What do you plan to do with this unused capacity or this unused stock?

Mr. BUDD. There is always some unused capacity in peacetime that may be made available for use during wartime, and that comes about principally because at the present time in this competitive field we are not operating our plants quite as efficiently as we can. We are not loading our cars as heavily as they might be. We are trying in every way we can to get our portion of the competitive business. In doing so there are some inefficiencies that creep in that do not make full use of the plant. It is that additional capacity that is available.

Mr. COHELAN. In terms of the kind of expansion that took place in the Second Warld War, would you be able to meet a military or mobilization requirement?

Mr. BUDD. Would we?

Mr. COHELAN. Yes; as far as rolling stock is concerned.

Mr. BUDD. I think there is doubt of it. We did not have a full estimate of all of the requirements that we might be required to meet in an emergency. The military, I know, has done work on the strictly military portion of the load, but there is quite a little doubt as to what is going to be required for essential civilian traffic. And the essential civilian traffic includes support of production for the military, the movement of raw materials and things of that kind. Without that kind of an estimate of the load that will have to be carried in an emergency, we are not in a very good fix to tell how well or how poorly we will be able to meet it.

Mr. COHELAN. Mr. Budd, out where I come from we have an Oakland Army Base and anyone can ride by and they can see out in this vast acreage there are a lot of cars sitting out there, pullman cars and dining cars and so on. The Army has them all painted up. It

looks like they are stockpiled there. Would you recommend, as has been suggested by many scholars in this field, and students of this subject, that there be some kind of a railroad stockpiling program by the Government?

Mr. BUDD. There is an ownership of a few cars by the Government at the present time. In addition to arrangements made with the Pullman Co. for the holding of some passenger cars. I think that matter has been dealt with in some correspondence in connection with these committee hearings.

This question of stockpiling is a difficult one to deal with. I have given it some thought, some considerable thought. It seems to me that you are up against this in trying to provide stockpile: The most critical needs probably are in freight and passenger cars, not so badly off in locomotives. The critical point varies from time to time on the freight cars with the rises and falls in some of the seasonal business.

Taking freight cars first, if a stockpile of a substantial number of freight cars, new freight cars, were provided, I am sure that political pressures would force those cars into service at a time of a critical shortage in this country. The cars would be quite probably forced into service. That in itself would discourage the railroads from providing the peacetime needs——

Mr. COHELAN. You mean at a normal rate of acquisition for the actual operating road?

Mr. BUDD. That is correct. Now, it might be possible, and I would think it would be better to consider working out with the railroads an acquisition of some freight cars which are not new, but still have some service life in them, with the provision that the railroads would replace those with new cars. Arrangements might be made for the Government to pay for those cars on a basis of what service life there is left in them and stockpile those cars.

Those would not be desirable cars to throw in except in a critical car shortage and I don't think there would be the same demands made for them.

There is a further possibility with respect to repair parts. We got into terrible trouble for lack of repair parts in the last war. It may very possibly be a sensible move to stockpile those repair materials on a revolving basis, that is, the Government hold them in stock if the railroads need that type of equipment for their ordinary use, they would draw from the Government and the materials would be replaced so that your stockpile would continue fresh and up to date and not become obsolete.

Mr. COHELAN. It would be a standardized and nonobsolete——

Mr. BUDD. That is right; yes. There is experience left from World War II to tell you very quickly what the critical materials might be for that kind of a stockpiling program.

Mr. COHELAN. You have talked about physical facilities, Mr. Budd. What would happen allowing for this pattern of decline, to use your own words in your testimony, or shrinkage or whatever you want to call it? What happens about the manpower requirement? You say you have a skilled manpower pool. What are you going to do if it decreases and there is this new requirement? Can you meet it in a mobilization situation?

Mr. BUDD. We have some excess of manpower at the present time. Again, probably not as great as it was at the beginning of World

World II. I would thlnk that under present-day operations a great many of the tasks do not require the same skill as was required in the days of steam operation, particularly true of the operation of locomotives.

The operation of those can be picked up much more readily than the operation of the steam.

Mr. COHELAN. How about the servicing of locomotives, Mr. Budd? I was thinking of it in relation to the problems of mobilization.

Mr. BUDD. I think that we would not be in too awfully bad shape for that because I think we could increase the capacity of the plant to handle traffic without very much increase in manpower.

Mr. COHELAN. Would there be any problem if any of these units were knocked out where you have repair facilities or anything of that kind?

Mr. BUDD. That is a problem. Although those facilities are pretty widely scattered and the chances of a large part of them being knocked out at one time is at a minimum. Compared to other forms of transportation, I believe our problems with manpower would not be as great. We are able to produce so much transportation with one locomotive pulling a whole string of cars as compared with the other agencies which have to have a power unit with each one of their transportation units. Our maintenance problem would not be nearly as great as, for instance, hauling by truck or hauling by air.

Mr. COHELAN. I was interested in your remark about the earning position of the railroads. I think you said that currently it was something in the area of four point something percent. What do you regard as a normal rate of return?

Mr. BUDD. Well——

Mr. COHELAN. Considering your regulated characteristics?

Mr. BUDD. If my memory serves me right, the Transportation Act of 1920 provided for 6 percent as a proper rate. I think I can safely say that there have been very few times when the railroads have approached the 6 percent that was then considered normal. I see no reason to consider a change. I think we should have 6 percent.

Mr. COHELAN. Do you feel that would be about the level of return to maintain a healthy economic operation?

Mr. BUDD. In my judgment, 6 percent would provide you with a transportation facility that would be strong and healthy and able to do anything that you would want to do.

Mr. COHELAN. You speak about some of the difficulties of price competition in the market. By unregulated—correct me if I am not correct. I am just listening to your testimony and trying to figure out why it is like this—unregulated competition. Do not these other common carriers operate under the regulation of the Interstate Commerce Commission and is not the Interstate Commerce Commission aware of this difference, and, if so, why don't they do something about it?

Mr. BUDD. There are certain exemptions that are written into the act, and the one that I have mentioned and dwelt on as being very bothersome is this one that exempts the transportation of agricultural commodities and it also applies to fish, without regulation of rates, and by motor carrier. Anyone who has a truck can go out and haul for any price that he pleases.

Mr. COHELAN. He doesn't have to publish a rate.

Mr. BUDD. He does not.

Mr. COHELAN. Get a license——

Mr. BUDD. That is correct.

Mr. COHELAN. Just as a matter of speculation, if you were to be granted this exemption or at least this right to compete, how would it change your position? I don't understand.

Mr. BUDD. We would have the same right to pick and choose and to vary our rates as our competitors do.

Mr. COHELAN. How would you offset this? Somebody would have to pay for it.

Mr. BUDD. We would use the same tactics that they do and charge low rates where there was not such a great rate and where we had a greater sufficiency of cars. I say it will bring a chaotic condition in transportation if it comes about.

Mr. COHELAN. As a practical matter, isn't there another factor involved here, allowing for the problems of unbridled competition, allowing for some other factors in the marketplace, isn't time a factor here? I mean, can you give delivery dates for certain types of specialized operations, can you deliver to meet the time requirements of clients and so on?

Mr. BUDD. Our principal haul of grain does not permit us to do so because it is a quite different operating performance than that provided by the trucks. Our rates are carefully worked out by the ICC and carried through the courts and provide for a part of the marketing service of grain, a link between the farmer and the primary markets where his grain is sold.

We are required to stop our cars and permit an inspection of the grain to take place and permit the grain to be sold on the result of that inspection. And to be sold in whatever market seems to be the most advantageous pricewise.

The trucks only provide a haul. Their inspection is at a minimum and has very little to do with the marketing. So that a comparison of the time element is not of great significance in the haul of this grain.

Mr. COHELAN. Aren't some of the railroads out in the West in the trucking business, Mr. Budd?

Mr. BUDD. A great many of them have some trucking operation of their own.

Mr. COHELAN. Wouldn't this be the point at which to compete with some of these other operators?

Mr. BUDD. The difficulty is that we have these fly-by-night operators about whom I spoke, who are going broke at the rate of about a third of the group each year as testified by their own representative because they are hauling below their own costs. We are faced also with the truckers who are regulated truckers and are picking up a return load at a very low rate so as to get their gasoline money and tire money on their way back in. It costs them little more to bring their truck back into the center of population or their headquarters under load than it does empty.

Mr. COHELAN. Getting back to the actual problem that we face as a committee, you feel that as far as the industry is concerned, as you know it, that presently you would be in a position to meet the requirements both in physical facilities and manpower requirements of a mobilization situation? Is that a fair statement? That the industry as you know it would be able to meet the requirements

presently of a manpower mobilization, not a manpower, but a mobilization situation?

Mr. BUDD. We would have difficulty in doing it.

Mr. COHELAN. You would have difficulty now?

Mr. BUDD. So far as I can see, and so far as I can judge from the load that would be expected of us to carry.

Mr. COHELAN. Do you have any other recommendations to make to us focusing on the defense situation other than the ones that you have mentioned in respect to economic competition?

Mr. BUDD. I am hopeful that the need for a sound railroad transportation system can be recognized and that steps, as I have recommended, can be taken in that direction. That is the principal thing I would like to see.

Mr. KILDAY. We appreciate your coming, Mr. Budd.

Next is Mr. W. Thomas Rice, president of the Atlantic Coast Line Railroad Co. Mr. Rice.

Mr. RICE. Mr. Chairman, I have filed a copy of my statement with the committee. I respectfully request that I be allowed to brief it.

Mr. KILDAY. Without objection the statement will be included in its entirety at this point in the record and you may proceed as you see fit.

STATEMENT OF W. THOMAS RICE, PRESIDENT, ATLANTIC COAST LINE RAILROAD CO.

Mr. RICE. My name is W. Thomas Rice. My residence is 1708 Butte Road, Richmond, Va. I am president of the Atlantic Coast Line Railroad Co., with headquarters at Wilmington, N.C.

The Atlantic Coast Line operates 5,299.74 miles of railroad in the six southeastern States of Virginia, North Carolina, South Carolina, Georgia, Florida, and Alabama. Its principal main line extends from Richmond, Va., to Tampa, Fla., with other main lines diverging to Norfolk, Va., and to Wilmington, N.C., respectively, on the east, and to Columbia, S.C., to Augusta, to Atlanta, and to Albany, Ga., and to Birmingham and to Montgomery, Ala., respectively, on the west. The system includes an extensive network of lines in the Florida peninsula.

Mr. Chairman, I should like to state at the outset that I believe these hearings with respect to the adequacy and potentiality of transportation systems in the event of mobilization are definitely in the public interest and should emphasize some important facts of life about our defense posture.

I welcome the opportunity to appear before this committee and to discuss with you the unique importance of the railroad industry in the national defense picture. My interest stems not only from my connection with the railroads, but also from my current military reserve position as director general, GHQ, Transport Railway Service, and from a past record of service in military transportation.

My remarks must necessarily be concerned primarily with the Atlantic Coast Line and with its ability to respond in an emergency mobilization. However, I think you will agree that Coast Line is certainly typical of the railroads in the southern region of our country and probably of those roads in other regions. So, it is hoped that this discussion in its small way represents the thinking of the industry as a whole.

Much has been said and written about the essentiality of the railroads in time of war. I will not go into detail on this point because I believe it will be covered adequately by other witnesses. Certainly past experience has proved beyond doubt that the railroad industry is a vital part of national defense. The Government considered the railroads so important in World War I that it put them under Federal control—with disastrous results, I might add.

Between World Wars, the revolutions in the automobile and airplane industries clouded people's thinking and caused the railroads to be deemphasized in defense planning. The Federal Government in this period spent $40 billion on highways and streets, $2 billion on waterways, and $0.5 billion on airports and airways, but not one penny on the railroads.

Yet, when World War II came, it was the railroad industry which responded so magnificently in the emergency to carry the bulk of both military and civilian traffic. History repeated itself in the Korean conflict when the railroads once again were called upon to carry the bulk of military traffic.

No other mode of transportation has the flexibility, the efficiency and the economy of operation that characterize the Nation's railroads This can be illustrated by calculating the manpower and fuel required to move 100,000 tons of freight from the west coast to the east coast by the various modes of transportation. Studies have shown that motor carriers require four times as much fuel to move this tonnage between these points as do the railroads and 13½ times the manpower; water carriers require 5 times the fuel and 3½ times the manpower required by rail, and air carriers require 25 times the fuel and 11 times the manpower required by rail. These figures taken on real significance in an emergency when fuel and manpower are at a premium. They emphasize the fact that railroads of necessity must be the primary transportation facility in our national defense effort.

Almost every military expert quoted on the subject stresses the importance of railroads to national defense. Wartime logistics demands the highly integrated and tightly controlled system of transportation that only the railroads can offer. Maj. Gen. Frank A. Heileman, a former Chief of Transportation, U.S. Army, said:

> Only the railroads have the capacity to meet all military traffic requirements in the United States. A combination of all types of carrier service, exclusive of railroads, would not meet our requirements.

This need is strongly emphasized by Gen. James A. Van Fleet in a recent book where he pointed out that in any future national defense emergency:

> We shall without a doubt have imperative need for the quantity and type of transport which only railroads can supply * * *. We must, therefore, take care to see that these carriers are kept strong, vigorous, and progressive * * *. I know that measures to insure this can be neglected or deferred only at grave peril to our national security and survival.

Once the need for a strong system of railroads is recognized, questions instantly arise as to their present condition and to their ability to respond to a national emergency. I, of course, cannot speak for the whole industry on these particular questions. I can only cite the Coast Line as a typical example in the belief that it is representative of the industry.

The ability of the Coast Line to respond to a national emergency at the present time can be measured by two factors: (a) prior experience and (*b*) present condition.

The best example of prior experience is World War II, when Coast Line rose up from the doldrums of depression to more than triple its total traffic output in meeting the emergency.

Our traffic and mileage statistics show that in freight transportation the number of revenue-tons per mile of track—a basic criterion—increased from a low of 2,634,007,295 in 1939 to a high of 9,352,602,575 in the war year of 1944.

In passenger transportation we experienced an even greater increase, the number of revenue passengers per mile—also a basic criterion—jumping from 249,435,219 in 1939 to 2,325,668,416 in 1944.

In my opinion, only one factor is present today which would give Coast Line any comfort in the face of an enemy attack. That is our geographic location. We serve an area which, for the most part, has a divergent population with no real heavy concentration of people in one place. Birmingham, Richmond, Atlanta, Jacksonville, and Tampa may be exceptions, but there are probably many more cities in our country which would receive a higher priority as a target in an initial attack.

We should be able to respond quickly in an emergency. One of the great values of railroads in wartime is the fact that their plants are widely scattered with few concentrated areas of equipment and materials. This reduces their vulnerability in case of attack and permits quick restoration of service after an attack. Coast Line has such a dispersed plant.

Another geographical factor to be considered in Coast Line territory in an emergency is the extreme vulnerability and consequent inadequacy of coastal shipping along the Atlantic seaboard. It is often contended that water carriers have increased importance in transporting materials in time of war. This may or may not be true in the inland areas, but the statement is not true when applied to coastal areas such as the one through which Coast Line operates. Experience has proven that coastal waterways such as the famed inland waterway from Maine to Florida and the ocean shipping routes from New York to Miami are so prone to submarine and other naval attack that they are practically useless from a logistical standpoint in time of war. Railroads such as the Coast Line are then called upon to take up this slack and to carry the brunt of the load by themselves.

To lend emphasis to the point that railroads have proven a good "rescue squad," I have but to remind you that during World War II, when tankers were being sunk off our southeastern shore, the railroads had to step in and move a million barrels of oil per day. This was no little accomplishment.

The ability of the railroads to quickly restore service after enemy action has been proven time and time again. Histories of World War II and the Korean conflict are replete with confirmation.

According to ordinary business demands, our car situation is not critical. On June 30, 1959, we had 28,906 passenger and freight train cars in service. This figure is considerably larger than what was available in 1941, but we have no way of knowing the demands of the next emergency and can only guess as to the adequacy of this fleet. In my opinion, this number is probably low when viewed in the light of the probable demands of a national emergency.

Our passenger-car situation is more serious than freight cars. In 1941, we had a total of 506 passenger cars in service. On June 30, 1959, we had 568 of these cars—a noticeably smaller percentage of increase than with respect to freight cars, because the growth of the passenger business has not kept pace with the freight business.

It seems to me that the resolution of the problem of whether there will be enough rail passenger equipment to meet both civilian and military requirements in the event of mobilization rests in the presently unanswered questions:

How many airplanes, currently used by scheduled and nonscheduled airlines, will remain available for domestic public service in time of war?

Will a high percentage of the military and civilian passenger traffic currently moving through crowded airports be diverted to railroad stations, many of which receive little or no patronage from Government-sponsored passengers as well as the general public?

Probably the most important factor in considering our present condition is our financial situation. Coast Line is slowly recovering from the recession of 1957–58. However, the entire industry is sick and needs a shot in the arm. Railroads generally earned a return of only 2.76 percent upon their average net property investment in 1958. Considering the huge investment represented, this figure is dangerously low. Net working capital which dropped to $555,332,201 in 1957 below the accepted "safe" minimum of $600 million, increased to $805,644,734 in 1958, but only because railroad buying was cut to the bone. Traffic losses and increased costs were the major reasons for the overall financial decline which was highlighted by a drop in net railway operating income to $761,744,586, the lowest since 1949. Obviously, low and declining earnings have an adverse effect on the amount of capital available for improving plant and service, and without such capital expenditures the railroads cannot hope to be prepared to meet a national emergency.

Coast Line has made no specific preparations for mobilization. We are aware of no specific Federal plans for using the railroads in an emergency. Our only contact has been with local civil defense people in isolated instances where such local authorities have devised survival programs that call on the railroad for transportation needs. Even this contact has not produced any definite requirements or any real preparedness program on our part. This lack of preparation is, in my opinion, a major weakness and will undoubtedly affect adversely our ability to respond to an emergency.

It seems to me that the above discussion emphasizes that Coast Line and the railroad industry generally are not in a position to react to the need for all-out mobilization as quickly as in the past. The lack of planning is one reason for this and is emphasized because the concept of nuclear attack differs from any past experience and will demand a faster response on the part of the country. But the major reason for any deficiency lies in a car shortage. This deficiency in turn is the result of the lack of needed capital. It is axiomatic that we need higher earnings if we are to attract investment capital to correct the situation.

Mr. Chairman, I do not profess to have all the answers to the problem. However, I do strongly believe that if the railroads are going to be physically able in case of an attack to do the job that this

Nation will expect them to do, Congress must act and act quickly to remove some of the burdens under which we presently labor.

Congressional action in passing the Transportation Act of 1958, in repealing the Federal excise tax on transportation of freight, and in reducing the excise tax on transportation of persons is quite inadequate and constitutes a bare beginning. In fact, this action is almost completely outweighed by the passage of the railroad retirement bill which increased our operating costs by some $200 million a year.

The railroad industry is still hamstrung in its efforts to increase earnings and reduce costs by outmoded, unnecessary regulations and by direct Government action which supports our competitors to our detriment. It is ironic indeed that the Government will call on us for the bulk of transportation requirements in case of an emergency and will expect good results, yet it is failing to take this into account in the allocation of traffic by the Department of Defense, General Services Administration, and in policies employed by the Post Office Department.

There are many areas which we believe should come under congressional scrutiny and which should be productive of legislative relief for the railroads. These areas will be covered by various industry witnesses. I shall confine my remarks to two of them: Federal tax policies and transport diversification.

However, I would first like to comment briefly on a topic which will be covered in detail by another witness—the agricultural exemption of the Interstate Commerce Act. As you may know, this exemption is that provision of the act which exempts motor carriers of agricultural commodities (not including manufactured products thereof) from economic regulation by the Interstate Commerce Commission.

These unregulated carriers are not subject to operating authority, control, rate regulation, rules requiring equal treatment to shippers, areas and commodities, and rules requiring insurance and claims responsibility. They can pick and choose whatever traffic they desire and establish their rates at whatever levels they wish without considering whether the charges are reasonable or nondiscriminatory, as required of regular carriers by the act.

In addition to these advantages, the unregulated carriers have been aided by court interpretations and Commission rulings which have broadened the exemption to cover a variety of commodities, many of them far removed from the farm.

The volume of freight transported in direct reliance upon the statutory exemption is known to be tremendous although it cannot be determined accurately. The Coast Line, which serves a primarily agricultural area, has for a number of years had a seriously declining traffic situation in citrus fruits and vegetables moving out of Florida and other important fruit and vegetable producing areas in Alabama, Georgia, the Carolinas, and Virginia.

For example, during the 1947–48 seasons the railroads handled 70 percent of the traffic in citrus fruits and vegetables moving out of Florida. By the 1957–58 season the rail portion of this traffic had sunk to 33 percent. Obviously the agricultural exemption has diverted a vast amount of traffic to unregulated carriers whose rates are not open to competition from the railroads who are rigidly regulated by the Interstate Commerce Commission. This loss of traffic is a serious blow to the economy of those lines like Coast Line which

do a large business in commodities from the agricultural community. Our industry can ill afford such a substantial loss in this time of crisis.

The impact of the agricultural exemption can be graphically shown by looking at the number of cars of the Fruit Growers Express which now stand idle, no longer carrying the vital citrus traffic from Florida to the Nation's markets. It is distressing to see a large percentage of the present fleet of some 13,011 cars owned by the Fruit Growers Express presently idle as unregulated carriers, working under the exemption, have diverted this valuable traffic from the railroads.

After extensive congressional hearings last year, the Transportation Act of 1958 was passed and included an amendment to the Interstate Commerce Act which, in effect, froze the agricultural exemption at its then declared extent as set out in ruling 107 of the Bureau of Motor Carriers and prevented the further expansion of the abundantly large list of processed or manufactured commodities which are transported free from regulation.

It also removed frozen fruits and vegetables and certain foreign-grown commodities from the exempt list. This amendment, while a step in the right direction, will do very little toward equalizing competitive transportation conditions unless further congressional action is forthcoming. Even with the amendment, the railroads are virtually excluded from participation in the handling of large numbers of commodities which continue to be exempt, among them fresh and frozen dressed poultry, shelled peanuts, frozen milk and cream, and powdered milk—all in stages of transportation far beyond the initial movement from farms, which movement the exemption was initially intended to cover. Placing these commodities in a special status exempt from regulation is of no favorable significant benefit to farmers and is very detrimental to regulated carriers who cannot readily adjust their rates to meet their unregulated competitors in the trucking industry.

Congress must reexamine the agricultural exemption and remove the inequity of treatment which results in decreased railroad earnings if a strong railroad industry is desired. I submit that, in all fairness, if Congress does not bring the exempt trucking industry within the scope of Commission regulation, then it should remove regulation completely in the area of agricultural commodities and make the exemption applicable to railroads and other regulated carriers. Our industry should receive equality of treatment in this highly competitive area.

Earlier in this testimony, I commented on the financial condition of the Coast Line and the railroad industry generally and noted that this condition is serious. Since the financial stability of the industry is a prerequisite to or being in a position to adequately meet an emergency, it behooves Congress to take a new look at the factors causing this depressed condition. Particularly should Congress examine tax policies relating to capital investment. If railroads are more nearly to hold their own in expanding and modernizing their plant, they must have more realistic tax treatment.

The railroads have expended nearly $14 billion for improvements to their property since the end of World War II. Despite this vast sum, current needs for further expenditures tend to make this figure seem relatively small. It is estimated conservatively that about $1 billion is needed annually solely to provide an adequate supply of

cars and motive power. This anticipated current annual expenditure for equipment alone compares with $1.1 billion expended on the average for all capital expenditures during the last 12 years.

During the period since the war the railroads realized a rate of return of about 3.75 percent on their property investment. This dropped to 2.76 percent in 1958. This loss return precluded any equity financing of capital improvements. Consequently, to augment funds derived from meager earnings and free cash from depreciation and amortization accruals, resort was made to the sale of equipment trust obligations. In 1945 total outstanding equipment trust obligations amounted to $773 million; by 1956 this had increased to $2.631 billion. Not long ago funds could be procured from this source at a cost of around 2 or 3 percent. Today, however, even the most prosperous roads are required to pay close to 5 percent, while those less fortunate pay nearly 6 percent. To an industry now earning less than 3 percent on its net property investment, these rates are almost prohibitive.

It is obvious that with continued diminishing operating earnings in sight, inability to resort to equity financing for capital funds, rapid amortization a thing of the past, equipment trust financing becoming increasingly costly, and relatively little free cash available from depreciation because of the usually long life of railroad depreciable property and consequent low depreciation rates, relief in some form must be provided if the railroads are to continue in the future as in the past.

In an effort to obtain this relief, the industry supported three tax proposals introduced in the 85th Congress dealing with depreciation and capital improvements. None of the proposals gained passage, but they are certainly important enough to command a reexamination by the present Congress. I should like to discuss these proposals at this time.

The first of the proposals deals with the reduction of the maximum depreciable life of property. It is a matter of common knowledge that railroad depreciable property is extraordinarily long lived—lives of 50 to 100 years have been used generally with respect to roadway structures and lives up to 35 years on equipment. The Internal Revenue Service assigns these lives on the basis of past experience. The resulting depreciation rates were set during the earlier years of income tax administration, at a time when it was probably believed that fixed railroad property would last indefinitely. At that time the railroads had what amounted to a virtual monopoly in the field of transportation and neither the Internal Revenue Service nor anyone else could foresee the shape of things to come. Even the railroads were lulled into a sense of false security by their apparent firmly entrenched position. Today all of this is changed and the railroads find themselves fighting for their very existence.

The average overall rate for the industry is but little more than 2 percent. It is obvious that this meager flow of free cash is absolutely inadequate to meet even the downpayment for replacements in these days of inflated cost. It is equally clear that in the light of present technological advancement and high costs, no taxpayer should be required to wait such inordinate lengths of time to recover his capital nvestment in depreciable property.

The position of the railroad industry with its small depreciation deduction on its long-lived assets compares most unfavorably with its competitors whose depreciable assets have been assigned relatively short lives.

For example, the cost of new airplanes may be depreciated over a 5-year period, while heavy trucks and intercity buses are written off in 8 and 7 years, respectively. The mere statement of this comparison shows the competitive difficulty in this area. For further illustration, see appendix A. In such an era of change, both in the way of doing things and in the diminishing value of the dollar, it is transparently clear that modernization and efficiency can more easily be accomplished by our competitors who recover their capital cost over a short period of time than by the railroads. We realize the need for such activity in order to continue to exist but are hampered in so doing by such a little annual cash recovery due to long-lived property.

In order to alleviate the situation and to reduce the present disparity in depreciation rates between the railroads and their competitors, the railroads propose that no railroad depreciable property will, for tax purposes, be presumed to have life longer than 20 years. The proposal contemplates that acquisition of railroad depreciable property, other than rolling stock, by the railroads after a specified date, January 1, 1959, for example, will, if the taxpayer so elects, be written off in 20 years and rolling stock in 15 years.

As to depreciable property other than rolling stock on hand on such date, it may be treated as having a remaining maximum useful life of 20 years and rolling stock as having a remaining useful life of 15 years.

The proposal simply permits the recovery of cost in a more reasonable time. No subsidy or tax forgiveness is provided. The taxpayer recovers no more than he would otherwise; he just gets it back more quickly, which is highly desirable and vitally important to the railroads in their present circumstances.

Representative Ikard of Texas has introduced H.R. 2172, a bill designed to put this proposal into law. The railroads vigorously support this measure.

One of the proposals advanced in the original Smathers bill, S. 3778, at the last session of Congress, was to permit the creation by the railroads of construction reserve funds. It was designed to encourage the replacement of railroad facilities and necessary modernization of the railroad plant.

As income tax laws are presently constituted, such capital improvements as any railroad can make must be paid for from net income after all taxes have been paid. If improvements could be made from net income before taxes, the railroads' situation would be improved considerably since they would have more funds available for capital expenditures for plant and equipment. There appears to be little that can be done about the rising cost of such equipment, but something can be done about the heavy tax burden in relationship to the need for capital improvements. The construction reserve proposal is the railroads' solution to this problem.

This proposal contemplates the establishment of a construction reserve fund on the books of a railroad in accordance with rules and regulations prescribed by the Secretary of the Treasury and the Interstate Commerce Commission. Amounts deposited in this fund

would be deductible by the railroad depositor in computing its Federal income tax.

Amounts so deposited could only be used for the acquisition of equipment and other property used in the transportation business by railroads or for the reduction, in whole or in part, of debt incurred in connection with such acquisitions. Unless so used within a 5-year period, deposits in the fund would be taxable at the rate applicable to the year when the deduction was taken. Withdrawals for the purpose of such debt reduction would be limited to an amount equal to the adjusted basis of the asset with respect to which the debt is being reduced. To the extent that the funds are withdrawn from this fund for the procurement of railroad equipment, for example, it is required by this proposal that there would be a corresponding reduction in the basis of such property for the purpose of computing depreciation.

By way of illustration, if a railroad corporation deposited $1 million into such a fund, it would be entitled to a deduction therefor of such an amount in computing its tax. If, within 5 years, it failed to use the deposit for the purposes stated, tax would be due thereon at the rate applicable when the deduction was taken. If the deposit is used in full for the purchase of freight cars costing $1 million, their basis for purposes of computing depreciation would be zero.

The accelerated recovery of their cost by way of the deduction and the coincident reduction of their basis results in a shrinkage of the depreciation deduction in future years at which time the Government would recover its initial loss by way of the higher taxes which would then have to be paid. This is tax deferral; not tax forgiveness. By this proposal, only costs are recovered. In the financial squeeze which now constricts the railroads, it is clear that this proposal would provide capital for plant improvement with little, if any, foreseeable detriment to the Government.

This proposal is far more than just a tax matter. The benefits that would flow from this proposal are far more specific and tangible than those that flow from such a plan for the encouragement of the acquisition of equipment as rapid amortization.

This plan will have specific benefits affecting the long-range operating efficiency of the railroad transportation system.

For example, it is a fact to be reckoned with that there is necessarily a substantial timelag between the placing of orders for railroad cars and the delivery of such cars. It is also a fact to be reckoned with that our economy is subject to frequent rises and falls. The rises and falls in our economy are reflected to an exaggerated degree in railroad-car loadings and generally orders for equipment go up and down with car loadings. The net result is that when we have a sharp rise in our economy, all too frequently it is following in the wake of a slight recession when orders for cars have been sharply curtailed so that the demand for cars is generally past its peak before the necessary equipment becomes available. The construction reserve fund contemplated in this proposal would very definitely tend to level out the peaks and valleys of railroad orders for equipment. It would permit orderly long-term programing which would be little affected by minor swings in the economy. If money were placed in the construction reserve fund in good times and there followed a recession, a railroad company faced with the alternative of withdrawing money from the fund and paying taxes on it or continuing with its program of capital replace-

ments would almost certainly elect the latter alternative. The collateral effect of such long-range programing of railroad-equipment purchases and the elimination of sharp peaks and valleys would go a long way toward converting many of the railroad supplies from victims of a feast or famine economy to beneficiaries of an orderly and stable economy with unquestioned resulting benefits in the form of greater efficiency, more stable employment and lower costs, which, of course, would redound to the benefit of the railroad purchasers as well as the suppliers themselves.

It is proposed by the railroads that this construction reserve proposal be accomplished by way of an amendment to the Interstate Commerce Act. It is interesting to note that a provision somewhat similar to this appear in the Merchant Marine Act so the idea is neither new nor revolutionary. Presumably, it has worked well as applied to our water competitors.

The construction-reserve feature failed to pass either the House or Senate and was not included in the Transportation Act of 1958 as finally enacted. The industry feels that it should receive renewed consideration in the present Congress.

The last of these proposals in the area of taxation concerns the so-called reinvestment depreciation deduction. It was advanced at the last session of Congress by other industries and supported by the railroads in the general hearings held on revenue revision.

The investment depreciation deduction proposal recognizes the fact that dollars recovered today by way of depreciation go less than one-third of the way toward the procurement of new capital facilities. In this connection, it is of interest to note that a 50-foot boxcar 20 years ago cost on the average $3,600. In 1959, a comparable car cost $9,600.

By this proposal, recognition is given in the computation of the deduction to our inflated price structure. For example, it is proposed that the Secretary of the Treasury prescribe a price index that taxpayers apply to the original cost of a depreciable asset that is being retired. To the extent that funds are expended in any given year for the procurement of capital facilities (not necessarily in kind), a deduction in the computation of Federal income taxes would be allowed up to the difference between the original cost of the items retired and their adjusted cost as marked up by the index. If the amount actually spent is less than the marked-up price but more than the original cost, a deduction is proposed equal to the difference between the expenditure and the original cost. In the latter situation, a carryover deduction is provided of the unused deduction, being the difference between the amount spent and the marked-up cost of the assets being retired. The depreciation base for these new acquisitions would be reduced by the amount of the new deduction.

To illustrate this proposal, let us assume that the original historical cost of assets being retired amount to $1 million. Suppose further that the application to this figure of the price index results in an adjusted historical cost of $3 million. Suppose further that $3 million or more were actually spent for depreciable capital assets. In these circumstances, the reinvestment depreciation deduction would be $2 million, the excess of the expenditures over original cost within the limit of the adjustment for inflation. If more than $3 million were actually spent, the deduction would be no greater than $2 million.

However, if less than $3 million were spent, assume $2 million, then the deduction would be $1 million, with a carryover to the next year of $1 million reinvestment depreciation deduction.

By means of this proposal, the taxpayer gets back no more than he spends to keep his plant at par. That part of his expenditure representing inflated costs is immediately recovered by way of a deduction; the balance is recoverable in the future by way of depreciation—the normal procedure.

Because the depreciable base of the new items would be less by reason of the proposed deduction, the deduction for normal depreciation would be smaller over the life of the asset. This simply means that the taxpayer would pay more taxes in the future over the lives of the new assets in return for the proposed deduction. It is clear, therefore, that since the taxpayer only recovers his cost under this proposal there is no tax forgiveness involved, but rather a tax deferral. It should be noted that this proposal would not be mandatory, but at the taxpayer's election and, when made, would be binding as to future years.

Representative Keogh, of New York, has introduced a bill, H.R. 131, to implement this proposal, and it is vigorously supported by the railroad industry.

Another area in which the railroads seek legislative relief from outmoded regulation concerns their entry into other forms of transportation. Under present laws and policies of governmental regulatory bodies, no railroad may operate air or inland waterway service except upon a special showing. And railroads generally may not operate interstate truck service under the same terms and conditions applied to nonrailroad operators. Exceptions are limited operations authorized under "unusual circumstances" and ones holding "grandfather rights" because they existed prior to the Motor Carrier Act of 1935. Railroads are usually restricted to trucking operations that are auxiliary or supplemental to rail service or are used in moving goods that have either a prior or subsequent rail haul and move on railroad billing. Efforts of the railroads to expand their transportation service by utilizing other modes to meet the needs of shippers have been frustrated, despite the fact that such expanded service is definitely in the public interest.

Modes are qualitatively different, thus they complement one another. It is unfortunate, yet true, that all shippers are not located on rail, water, and highway arteries and adjacent to airfields. Yet many shippers choose or desire to utilize a combination of modes based on characteristics of their product, distribution patterns, and customer location.

Has it not been our experience that one of the first problems facing us on outbreak of war is how to conserve equipment and secure the most efficient use of the resources of the several modes of transport?

Out national economy can suffer as much from the duplication of facilities of different types as it can from duplication of facilities of like type.

It appears reasonable and desirable that action be taken now toward bringing about integrated transportation systems. In event of war, victory could well depend on an efficient transport system. Can we afford to wait?

It is axiomatic that the public interest is best served if the carriers upon which it relies are financially strong and structurally sound. This is especially true in the area of national defense and preparedness. In other industry, financial stability and strength is achieved by "diversifying"—increasing the number and variety of products or or services offered—the purpose being to reduce the chance of failure of the entire enterprise if any one of its products or services should fail. This principle of diversification is as sound in its application to transportation as it is to other industry.

Transport diversification not only would provide the broader base needed by all transportation companies for stability, but would also result in more efficient and more economical use of all transport facilities and equipment and more economical use of all transport facilities and equipment, thus reducing further the cost of transportation to the public. The railroad industry is seeking the opportunity to furnish a one-package transportation service.

We see such a service as a means of enhancing our usefulness to the public, as a means of insuring financial stability, and as a means of correcting the longstanding injustice of denying us equal opportunity to use facilities which our taxes help to provide, operate, and maintain.

Our proposal in this regard is not limited to our own interests. We believe that airplanes, trucks, barges, and trains are merely "tools" of the transportation trade and that all and any combination of these tools should be available to any transportation system, whether it be air, highway, water, or rail. We only ask the freedom to compete equally with our competitors.

The adoption of this proposal will not preclude adequate regulation of transportation. The public convenience and necessity would still be the criterion for granting transport authority and the various governmental agencies would still have control over the industry. It is interesting to note that the shipping public is almost universally in favor of the proposal—and it is the public interest which the regulatory bodies are designed to protect.

Transport diversification is not a new concept. In many countries, the Government operates the several forms of transportation under a plan of nationalization. In Canada, where one of the two principal railroads is nationalized and the other is privately owned and operated, both railroads operate other transport modes in addition to their rail service.

Canada is also served by many thriving independently owned competitive transportation systems, and this is a pretty strong argument that the fears of monopoly expressed in this country are groundless. Parenthetically, I might add that these cries of "monopoly" do not come from the shipping public who would be most adversely affected by any such monopoly, but rather by people with a vested interest who fear healthy competition.

There are presently three bills before the Congress, S. 1353, S. 1354, and S. 1355, all introduced by Senator Butler, of Maryland, which would amend pertinent sections of the Interstate Commerce Act and Civil Aeronautics Act to remove present restrictions on entering the various modes of transportation.

The railroad industry believes these transport diversification bills are in the public interest and are vital to our economic welfare. I respectfully commend them to your attention.

The above legislative relief would go a long way toward solving the problems of the railroads and insuring their strength and preparedness in time of emergency. At the same time, the industry must engage in various self-help activities. We must increase our traffic by better service and attractive rate adjustments (where permitted by the Commission), and we must cut our operating costs. The latter is probably our major internal problem and it revolves around outmoded work rules which foster the practice of featherbedding. We must resolve this problem—which costs the industry approximately $500 million a year. We are urging responsible labor officials to join with us in calling for a special Presidential commission to study rail working rules and to prescribe some acceptable remedy to the situation.

We are convinced that this featherbedding problem cannot be solved within the framework of partisan negotiation. Its solution would be a terrific boon to the industry since it would lower our operating costs, make the railroads more competitive in getting business, and create many new job opportunities.

If the railroads are to be sufficiently prepared to meet a national emergency, it seems to me that, in addition to the above suggested action, the Federal Government must give support and direction to the planning and executing of defense requirements for the industry. I realize that in peacetime it is extremely difficult to shake defense apathy and that the primary emphasis at the present time is on missiles and other modern retaliatory weapons.

However, I would like to suggest that the Department of Defense in coordination with the Office of Civil and Defense Mobilization give serious consideration to the formulation of national emergency plans which will give the railroads some idea of what will be expected of them in an emergency. To my knowledge, there is presently no agreement between the Department of Defense and the railroads for the use of railroad-owned equipment in the event of a full-scale mobilization, although certain agreements are in effect covering the movement of cars owned by the Department of Defense. Neither is there any information available as to the level of emergency requirements for equipment or as to the extent to which the railroads may be called upon to perform transportation now moving by highway and air. Expected workload figures should be all inclusive, with consideration being given not only to military requirements, but to civilian economy, civilian defense needs and war-supporting industries. We need to be informed as to such matters if we are to be adequately prepared.

Mr. Chairman, I would like to say in closing that the primacy of the railroads in the transportation field in time of national emergency is well established. Yet it is obvious that the industry is not in a position at the present time to adequately respond to full-scale mobilization and to assert this primacy. The railroads' inherent flexibility and capacity to expand are countered by a depressed financial condition and a weakened competitive position caused by some of the factors discussed above. I think you will agree that these factors must be promptly considered by the Congress in order that solutions may be found to the problems that beset the industry. The national security may very well depend on how quickly we meet this challenge and resolve these problems.

APPENDIX A.—*Effect of depreciation factors on 4 sections of transportation industry*

	Airlines	Buses	Heavy trucks	Railroads
Net income before depreciation	$20,000	$20,000	$20,000	$20,000
Depreciation allowable	20,000	14,300	12,500	2,000
Net taxable income	0	5,700	7,500	18,000
Tax at 52 percent	0	2,964	3,900	9,360
Net income retained	20,000	17,036	16,100	10,640

Estimated service lives, overall, for income tax purposes of equipment owned by different sections of the transportation industry:

Aircraft	5 years or 20 percent.
Heavy buses	7 years or 14.3 percent.
Heavy trucks	8 years or 12.5 percent.
Railroads	50 years or 2 percent.

The table on this page illustrates the effect of these estimated service lives upon the net income of the different types of companies. In order to prepare the table it was assumed that there were 4 companies, 1 airline, 1 busline, 1 heavy truckline and 1 railroad, each of which had $100,000 invested in depreciable plant and equipment, and each of which had a net income after deduction of all other operating expenses but before deduction of depreciation, of $20,000. The table, therefore, shows the widely varying effect of depreciation factors upon 4 companies with identical investments and identical incomes.

As illustrated in the table, an airline receives 10 times as much tax credit for depreciation, a busline more than 7 times as much and heavy trucks more than 6 times as much as the railroads.

TESTIMONY OF W. THOMAS RICE

Mr. RICE. I appear before this committee representing generally the southern railroads which lie south of the Ohio River and east of the Mississippi.

I would like to say that I relish the opportunity of discussing this very vital problem with you gentlemen. It seems to me that a hearing of this kind is most timely. I say that based on an entire adult life in a railroad business and also as the commanding general of the headquarters of the transportation and railway service which is a Reserve organization of the U.S. Army involving railroad employees.

I would like to say at the outset that I think we are trying to solve a problem when we don't know what the problem is. In my statement I have made reference to the fact that to the best of my knowledge we do not know what the requirements would be or what would be expected of the railroads in the time of a national emergency. Subsequent to the time that I prepared this statement, I understand that the Department of Defense has given you gentlemen some confidential information as to what they expect of the railroads. I think more important, to the best of my knowledge, no one has ever said what will be expected of the railroads from the standpoint of the civilian population.

I think that is so important, because there you have a tremendous problem. I do hope that out of your deliberations will come the necessary action to see that the proper arm of the Government can make these studies and determinations as to just what is expected from the standpoint of the civilian economy because we can well imagine the catastrophe that would prevail if adequate transportation was not available at the time of an atomic attack.

We think in the railroad industry that our transportation capabilities are certainly the most elastic and are essential in time of war. It has been so indicated in past wars and we think it will probably be the same case in the future.

To elaborate on my point that we do have a capability of using the least amount of manpower and fuel to produce the most effort, I would like to repeat for your general information a study concerning the movement of 100,000 tons of freight from the east coast to the

west coast. It is estimated that the motor carriers will require four times as much fuel as the railroads to move this tonnage and 13½ times the manpower. The water carriers require five times the fuel and 3½ times the manpower required by rail; and air carriers require 25 times the fuel and 11 times the manpower required by rail. These figures take on real significance in an emergency when fuel and manpower are at a premium. They emphasize the fact that railroads of necessity must be the primary transportation facility in our national defense effort.

I submit in time of war if those vital elements are scarce, we would certainly want to utilize that form of transportation that would give us the most for the least effort.

I heard Mr. Loomis and Mr. Budd quote eminent authorities and I would like to quote a couple more for the record. Maj. Gen. Frank A. Heileman, a former Chief of Transportation, U.S. Army, said:

> Only the railroads have the capacity to meet all military traffic requirements in the United States. A combination of all types of carrier service, exclusive of railroads, would not meet our requirements.

Gen. James A. Van Fleet had this to say:

> We shall without a doubt have imperative need for the quantity and type of transport which only railroads can supply * * *. We must, therefore, take care to see that these carriers are kept strong, vigorous, and progressive * * *. I know that measures to insure this can be neglected or referred only at grave peril to our national security and survival.

Well, if we believe that we need railroads in time of national emergency and we are now trying to determine their capabilities and not knowing what the load might be, I would like to address my remarks primarily as to what we think our capabilities are predicated on past experience and the present conditions. I might say that during World War II the Atlantic Coast Line Railroad found it necessary to increase its freight ton-miles 3.5 to 1 from the years immediately preceding the war in order to handle the load of a nation at war.

And its passenger miles increased 6 to 1 from the years prior to the war until 1944.

On the Coast Line we serve primarily the six southeastern States, and it runs from Florida to Richmond, Va., and we run along the seaboard. That is a vulnerable area for water transportation as proved in the last war. We think it is highly important that a railroad that serves the coastal areas be kept strong because they will have to pick up some of the shortage that you can anticipate if you had submarine warfare and elements of that type that would interfere with normal transportation.

I would like to emphasi e again for the record that we served as a rescue squad—I am speaking of the American railroads—in World War II. At one time it was necessary that we move a million barrels of oil a day to supplement the requirement brought about by the scarcity of transportation in the normal traffic of oil by the means of tankers.

Speaking of equipment, speaking of our capacity to render a service to a nation at war, I would like to quote just this one figure: At June 30 of this year we had 568 passenger cars on hand. I include in that the cars that carry passengers as well as those that are dead-end cars, baggage cars, dormitory cars or what have you. Of the 568 on hand only 456 were in repair. You see, the decline in passenger service has put us in a position where there is little incentive to repair

equipment that you are not using. When it becomes in bad order the economic necessity and the realistic approach to the problem is just to let it stand by.

Eventually some of it will go to the scrap dock because you cannot hold it forever.

We have not been told what we will be required to do in moving passengers for a nation at war. But I say this to you: I was president of the railroad that runs from here to Richmond. At Christmastime in 1956 I saw this terminal over here at Washington so jammed with people that we could not move. We had a lot of fog on the eastern seaboard, if you recall, at Christmas. We could not get the equipment to move the people out of the terminal. That is a peacetime holiday. Frankly, one of the conductors told me he had to get people off the steps so he could close the doors of the coaches. If that condition prevailed then, what would prevail in case of an atomic attack? I again refer you to this bridge going across the river in the afternoon when some of you gentlemen who live in Virginia try to go home. You know exactly what I am talking about.

I think the most important factor that would enable the railroads to be strong and capable of doing a job is the financial conditions that prevail. I would like to repeat some of the testimony that has been given before various committees of the Congress many times. Our net working capital in 1957 had dropped to $555 million whereas it was considered as safe as low as $600 million. There was an increase in 1958 but that increase was brought about by a most serious and most progressive curtailment of all purchases, of all types of expenditures that could possibly be delayed on the part of all railroads generally throughout the Nation.

I would like to say the Coast Line has no special preparations for a national emergency. We have none because we have been asked to make none. We have none because we do not know what we will be called on to do. If we are to be a part of the show, we would certainly like to know what is expected. Consequently, I again repeat I hope you gentlemen will be the means of all railroads being able to get that information.

This lack of preparedness could be very disastrous. If there is a deficiency on the part of the railroads to meet with a wartime emergency, as you have heard said this morning, it would seem to me it would rest in the equipment that is now available. I do not profess to know all the answers to the problem but I do know the Transportation Act of 1958, while it was a wonderful beginning and accomplished much, was only the beginning. There is much left to be done. There was much left out of the act that we in the railroad business would certainly have desired be retained in the act as originally proposed.

I might say that as you have heard before, the recent increases to the Railway Retirement and Unemployment Act for our people will cost the railroads an additional $200 million a year, it is anticipated.

I again repeat that our financial condition is certainly affected to a certain degree by policies that now are reflected on the part of the executive branch of the Government which you heard referred to this morning by Mr. Loomis and Mr. Budd. That is in allocating the governmental requirement for transportation among various modes. We feel that if they expect us to do a job in time of war, to pick up the slack, we should be allowed to do the same thing in peacetime, and

consequently make the moneys that would enable us to keep our plant modern, strong, and capable. You heard referred to this morning the matter of the Post Office Department. I might tell you just one instance.

This so-called experimental flying of surface mail—we call it surface because the person who put the 4-cent stamp on the letter expected it to go by land transportation. The flying of that mail from New York to Miami we estimate in losses of revenue to Coast Line to be $177,000 a year. There certainly is no scarcity of train service between New York and Miami. It is mighty good train service. Yet it is a policy of the Government to fly that mail as filler, as Mr. Budd said. Consequently we render a standby service because we are obligated to haul it in case the other means do not, and we are rendering a standby service with equipment and facilities that are used spasmodically.

I do believe, gentlemen, there is some room for congressional relief in our present financial condition, and I would like to address myself to some of our tax policies and also to transport diversification. However, coming from a railroad and representing the Southeast that for so many years has had one of its major sources of income derived from the products of the fields and the groves of Florida and South Carolina and North Carolina and Georgia, I would like to reemphasize what was said by Mr. Budd concerning this agricultural exemption. It has resulted in a decrease in the volume of that traffic moving out of those areas in the last 10 years from where we did haul at one time 70 percent down to 30. I might say distressingly that 33 is a rather liberal figure of what we expect to haul in the current season. You say, what is the agricultural exemption? Frankly, it just allows anybody with a truck practically to go in and barter with any shipper of these commodities that come under the list so that they can take the product and haul it to the market. If the supply of trucks is inadequate, or if there is a great volume of the produce that gets ripe or becomes ready for market at a given time, then the railroads are called upon to pick up the slack. I will tell you right at the current time we have gone through a watermelon season where the watermelons hauled out of Florida and Georgia by the railroads was probably the least in history.

I might tell you further that we had the equipment there to haul it. But they were brought out by the exempt carrier. We will only get a very small proportion of the total movement.

This exemption works just that way. The highway vehicle is able to haul them completely nonregulated, whereas we cannot. We are completely regulated, as we are with all other types of produce that we haul. We think that is discriminatory. We think that is not in the interest either of the general public or the railroad or the producer of the produce.

I say that because right now the Fruit Growers Express Co., which is the only company of these refrigerated cars that haul this produce out of the South, has better than 10,000 cars that are ice bunker cars and used primarily for this type of vegetable movement. They have a total of over 13,000, including their mechanical cars. But there is certainly no impetus to retain those cars and keep them in serviceable condition purely to create a standby transportation service. The problem now before the owners of that company is what to do with this equipment. Frankly, during the last war practically the Nation

was fed by the movement of that commodity by rails. I submit they probably will need the rails again to move it in time of another war.

But the agricultural exemption is putting it on the highway and it is of such great importance to the railroads serving the Southeast.

Mr. COHELAN. What would you normally do?

Mr. RICE. There is no other use for them. We are trying to think of some way of revamping them to another type of car. They are heavily insulated. They have ice bunkers. We sit around idle with the exception of an occasional use perhaps by some producer of canned goods, but they are not very adaptable to that because of the mechanization and palletizing of loading. They are not wide enough, the doors nor the interior of the car, to allow them to get in beer, for example. They are too narrow to get the number of cases they want in. Frankly we have not been able to solve the problem.

Mr. COHELAN. Is there any mobilization need for that kind of car?

Mr. RICE. We would certainly be able to use them for the thing they were built for and that is the movement of foodstuff. We could anticipate in the event of mobilization there would be a great need for them because the other forms of transportation would not be available as they are now. That is our own guess.

Mr. COHELAN. As of now what are you going to do with them?

Mr. RICE. We do not know.

Mr. COHELAN. The economic thing to do would be to dispose of them?

Mr. RICE. Yes. The most uneconomical thing to do would be to repair them while they are in bad order.

Mr. VAN ZANDT. These cars deteriorate quite rapidly.

Mr. RICE. Yes; you have a lot of brine on them from the salt on the ice, and there is a rapid area of deterioration.

Mr. VAN ZANDT. You put them on a railroad siding and the elements——

Mr. RICE. Take care of the rest of it. I would like to reiterate what Mr. Budd said and pass on. I went down in the areas of Florida where they produce these vegetables in great quantity, the Lake Okeechobee area where the black muck is. I talked to a lot of these shippers, and they tell me, "We like the railroads. We want to keep you down here but when this man comes in and says he will haul our produce for a price much under your rate we cannot turn him down." This is a realistic approach on the part of the shipper although we think that is shortsighted because he is taking care of his needs today and not for tomorrow. We submit that for your consideration.

If these commodities were originally exempt from regulation in the interest of the farmer, then it seems to us that the farmer's need is far removed from some of the interpretations put on the act. If it is right that they are considered exempt, we respectfully submit, exempt them from all forms of transportation. There is no reason one form should have it as an exempt commodity and not in another case.

I would like to further point out, as Mr. Loomis did, that $14 billion have been spent by the American railroads since World War II in plant and equipment. A lot of that money, gentlemen, has not been paid back. A lot of that money is in conditional sales agreements and various other things that has enabled us to buy the cars that we needed. I will tell you why: During the period since the war the

average rate of return to all railroads has been 3.75 on the depreciated value of their property. Last year it dropped to 2.76. With my own company—I say "own" because I work for it—it dropped to less than 2. I do not know if any of you gentlemen are in the banking business, but you are not interested in money that is secured by that rate of return on any property. In 1958 we are having a better year. We have grossed better than $81 million in the first 6 months. But after paying our fixed charges our return from railway operations is $2.3 million that we can put over to debt reduction to paying for new equipment, to improvement in plant, and paying dividends to the owners. Fortunately we have some other sources of income from other properties. But that is the result of the operation of 5,300 miles of railroads in six States. You see that we have a long ways to go insofar as getting the capital to expand and rejuvenate any deteriorating plant.

In an effort to obtain some tax relief there were three tax proposals submitted to the 85th Congress. I would like to direct myself briefly to those three. The first of them had to do with the depreciation of property. You gentlemen have heard Mr. Loomis discuss that this morning. It is completely unrealistic in our opinion that we have to depreciate, say, a car of rolling stock up to 35 years—I think the average is around 33 years—when all other forms of transportation, as far as we know, can depreciate their property in a much lesser period.

The Internal Revenue Service assigned these on the basis of past experience. However, we submit that that type of depreciation of a car based on its present costs leaves very little for the railroad in wihch to finance it. Most of this financing of conditional sales agreements runs for 15 years. If you have to depreciate the equipment over 33 you cannot very well keep up your payments from depreciation if you have to pay for the equipment in 15 years.

The proposal that we have submitted would contemplate that the maximum life so far as depreciation is concerned for fixed property would be 20 years and for rolling stock 15. We believe that is realistic, is proper, and in the public interest. We feel confident it would give railroads the needed cash to buy new equipment if they could depreciate the cars they now have or the ones that they might acquire in not more than 15 years.

I understand there is a bill before the Congress, H.R. 2172, designed to put this proposal into law. The railroads vigorously support that bill.

As you will recall, one of the original proposals of the Smathers bill, S. 3778, was that the railroads be allowed to set up a construction reserve fund. Basically this construction reserve fund would simply mean that moneys could be put into a construction fund prior to tax. And it could be kept there for 5 years. With it not used within that 5 years for capital improvement it would then be taxable at the rate applicable in the year in which it was assigned to such a fund.

Gentlemen, this is not tax forgiveness. It is simply tax deferral. It gives us an opportunity to have the needed cash to enlarge our plant, to modernize our plant, and we have to pay it back by increased taxes as the years go by. But it is a one-shot depreciation insofar as having the moneys available to do the work that we need to do. It has another very interesting and thoughtful facet. When business is bad on the railroads and they cannot buy equipment and they can-

not enlarge their plants, the suppliers of this equipment go begging. If we were allowed to take this money and program our purchases of cars, program our enlargement of facilities, we could then program our purchases from the suppliers, and thereby stabilize their efforts and probably enable them to give us a better price on some of the purchases that we make.

I again repeat by way of illustration: if a railroad corporation deposited $1 million into such a fund it would be entitled to a deduction thereof of such an amount in computing its tax. If within 5 years it failed to use the deposit for the purpose stated the tax would be due thereon on the rate applicable when the deduction was taken. If the deposits used in full for the purchase of freight cars totaled 1 million their basis for purposes of computing depreciation would be zero. That brings out my point. It is not tax forgiveness. It is not asking for a handout. It is asking that we be able to defer the tax so we would have the money to make the downpayment on the equipment.

It is proposed by the railroads that the construction reserve proposal be accompanied by way of an amendment to the Interstate Commerce Act. It is interesting to note, as Mr. Loomis indicated this morning, that that is nothing new. Something similar has already appeared in the Merchant Marine Act insofar as purchasing vessels for oversea movement. So perhaps we are copying a page from someone else's book that apparently works well.

We recommend that it should receive new thought by this Congress because it failed to ever achieve any real action during the Congress of 1958 when the Transportation Act was passed. The last of these so-called tax matters involves the so-called reinvestment depreciation deduction. It was advanced at the last session of Congress by other interests and supported by the railroads in the general hearings held on revenue revision.

Gentlemen, my statement will outline that in detail. Suffice to say, it is simply a means of purchasing a piece of equipment that today costs three times what it cost you originally, and being able to take the difference between its purchase price originally and its purchase price today, which would be determined of course by the Secretary of the Treasury—that is, a level—and being able to write that off promptly at the time the purchase was made. There again your bases for depreciation would be deducted by any amouut you could write off. But you can well visualize—and I would like if I may again talk in terms of Coast Line; we are right now buying $13½ million worth of equipment. We have net in the first 6 months a little over $2 million. But it is necessary in order to meet the demands of our shippers, in order to keep our car fleet capable of rendering the service to the area that we need and be able to compete for the business, that we spend $13½ million in new equipment, replacing wornout, obsolete equipment. Much of it is not 35 years old, but the changes in different types of equipment, the changes in the entire method of marketing, the changes in mechanization of loading have required railroads to buy modern equipment, where the old type would not suffice. We must depreciate those costs over many years. Those cars will cost approximately three times the amount that was paid for the car they replace. Again we submit if we were allowed to take the price of the original car and the price today and write it off promptly we would be

in much better position to finance these cars at less than an exorbitant interest rate.

I understand that such a bill—and again I repeat this is no tax forgiveness, it is again tax deferral—such a bill has been introduced by Representative Keogh of New York known as H.R. 131. It again is vigorously supported by the rail industry.

Another area in which the railroads seek legislative relief from outmoded regulations concerns the entry into other forms of transportation. Under present laws and policies of governmental regulatory bodies no railroad may operate air or inland waterway service except upon a special showing, and railroads generally may not operate interstate truck service under the same terms and conditions applied to nonrailroad operators.

Exceptions to that of course come under unusual circumstances and the grandfather rights which existed prior to the Motor Carrier Act of 1935.

If it is in the public interest that an integrated transportation service be available, if it is in the national defense interest that the railroads through their many farflung operations could use certain other forms of transportation to serve areas that they do not now serve or supplement some of their existing rail service, or do away with some noncompensatory rail service they are now operating and substitute in lieu thereof another form of transportation, if it is in the public interest, then I think that is the answer. Generally this type of thing is not opposed by the public. It is only opposed by those who might have a vested interest in other forms of transportation in fear it would react against them.

Again I repeat it is nothing new. In Canada you have a government-owned railroad and a private enterprise owned railroad that have many far-flung operations that would be very difficult to achieve on the part of any American railroad. We do not ask for it to preclude adequate regulations. We only ask for the right to do it on the basis that others can come into the railroad field if they so elect. It has been done in Canada and apparently done quite well. There are three bills in the present Congress submitted by Senator Butler, S. 1353, S. 1354, S. 1355, which would amend the pertinent sections of the Interstate Commerce Act and Civil Aeronautics Act to remove present restrictions on entering the present forms of transportation.

Gentlemen, you have my statement. I would like to again summarize this one feature of it: The problem is not known. I most respectfully submit it should be known. If you can use your good offices to make the problem known that will face the transport or the transportation industry of America, and I speak for all of them, in time of a national emergency, you have rendered a great service. We in the railroad business are desirous of being capable, we think we are, we are slightly prejudiced admittedly, we think we have the capability of expanding quicker than any other but we are floundering in the dark and until the problem is known the solution is impossible.

Thank you.

Mr. KILDAY. Thank you, General Rice. Your statement will be most helpful to us. I would like to say to the committee, the House not being in session, we can continue to sit.

We will recess until 1:30. We will then hear Mr. Symes of the Pennsylvania Railroad.

(Whereupon, at 12:22 p.m., the committee was recessed, to reconvene at 1:30 p.m., the same day.)

AFTERNOON SESSION

Mr. KILDAY. The committee will be in order.

We will resume our hearing this afternoon. Our witness is Mr. James M. Symes, president of the Pennsylvania Railroad.

Will you come around and have a seat here, sir?

We will be glad to have you proceed in your own way.

Mr. SYMES. My name is James M. Symes. I am president of the Pennsylvania Railroad. I very much appreciate the opportunity to appear today before your subcommittee in this series of hearings, to consider the preparedness situation in transportation. You are dealing with a most vital subject which, I believe, has not had the searching study and analysis it deserves.

In order to provide you with as much relevant material as can be assembled at this time, we have prepared, and I would like to file for the record, a complete written statement consisting of 74 pages. My presentation is supported in detail by an exhibit consisting of 135 pages, the larger of the two documents now before you.

Mr. KILDAY. Without objection, the statement will be included in the record in full at this point, and the exhibits will be included in the files of the committee.

(The full statement is as follows:)

STATEMENT OF JAMES M. SYMES, PRESIDENT, PENNSYLVANIA RAILROAD

Mr. Chairman and gentlemen of the committee, my name is James M. Symes. I am president of the Pennsylvania Railroad Co. I have been associated with the railroad industry for 43 years, mostly in the operating department.

I understand that your present inquiry deals with the adequacy of transportation systems to support the national defense effort in the event of mobilization. You have invited the presidents of three railroads, located in different sections of the country, together with the president of the Association of American Railroads, to testify on behalf of the railroad industry. In view of the vital role which must be played by the transportation industry in emergency situations, and especially in light of the unusual dependence on rail transportation in past mobilization periods, this is perhaps the most important hearing before a congressional committee that it has ever been my privilege to participate in—and there have been many. It deals with a subject that is so important to our future economy and existence that I have gone to great length in preparing my testimony and in furnishing exhibits to back it up. I would consider it a neglect of citizenship if I did not present you with a complete and frank statement as to my views of the subject you are inquiring into.

This committee should be strongly commended for undertaking this important study. My presentation will be rather broad and detailed, but I believe the importance of the subject warrants full treatment. Incidentally, the Chairman of the Interstate Commerce Commission told you that they have been unable to engage fully in national defense and mobilization planning work because their funds for this purpose have been cut off. All of the facts which I have tried to bring out in my testimony will, I hope, serve partially to fill this gap.

Before presenting detailed information on this subject, I would like to mention briefly my background in this field. My service in the railroad industry, substantially all of which has been with the Pennsylvania Railroad Co., extends over two World Wars as well as the Korean action. I have experienced the problems which railroads face in sustained periods of military action. I have seen those problems handled under Government control in World War I and under private operation in World War II and the Korean hostilities. My personal experience has included studying and forecasting the defense capabilities of the railroad industry before full-scale mobilization occurred.

In 1940 the National Resources Planning Board made an extensive study of problems of transport policy. Contained in its interim report was a discussion entitled "Problem of National Defense," by Col. William J. Wilgus, then retired from the New York Central Railroad. Together with Mr. F. G. Gurley, then vice president of the Santa Fe Railway, I reviewed this particular manuscript

and made extensive comments on it at the request of Mr. Ralph Budd, who was at that time Transportation Commissioner, Advisory Commission to the Council of National Defense. While Colonel Wilgus had concluded that the railroad industry was not sufficiently strong physically and sound financially to meet a national emergency, my own conclusion was that the demands of full mobilization could be met by the railroads. I concluded that railroad plant, motive power, and other equipment were in reasonably satisfactory condition and that the anticipated demands of national defense could be met adequately.

History, of course, establishes that the railroads did measure up during World War II to the demands made upon them, and performed a truly outstanding job in moving the great bulk of war material, defense and civilian industry traffic, and military and civilian personnel. It must be emphasized, however, that this result was made possible only because the railroads then had substantial excess capacity. Furthermore, their plant and equipment were in shape for a heavy increase in traffic because of their sustained level of capital expenditures, even during the depression years. As I will develop in more detail, these favorable factors simply do not exist now.

As another preliminary to my testimony, it would be advisable to point out the substantial extent to which the Pennsylvania Railroad represents our industry. For this purpose, I direct your attention to the map in the front of my exhibit. The heavy black lines on the map indicate the lines of the Pennsylvania. You will observe that we operate, generally, in the 13-State area east of St. Louis, Peoria, and Chicago to the eastern seaboard between New York and Norfolk. The southern boundary of our territory is generally the Ohio and Potomac Rivers, and the northern boundary is the Great Lakes.

Turning now to page 1 of my exhibit, you will see a statistical comparison of the Pennsylvania Railroad with all class I line-haul railroads of the United States for the year 1958. As to comparative volume of transportation handled, you will see in line 8 that we carried over 14 percent of total revenue passengers and nearly 13 percent of the total revenue tons of freight, as shown in line 10. The other figures in this statement indicate similar comparisons in other important areas, but detailed comment is not necessary. The Pennsylvania Railroad is generally recognized as representing about 10 percent of the entire industry.

SUMMARY OF CONCLUSIONS

I am sure you would like to know at the outset what my general conclusions are as to railroad capabilities to meet full mobilization conditions. These general conclusions will be explained in more detail at a later point in my testimony, but they will help you to tie in all of the facts which I will present throughout my exhibit and in this statement.

Although I am going to offer evidence which will permit a definite forecast of railroad industry capabilities, when it comes to the matter of transport demand under mobilization conditions we have to make certain assumptions. Some have said that if there is another general war it could very well be over within a few weeks. If that is so, there is little need for our wasting time and energy on the transportation problem. However, if that opinion is not correct, or if there is any real question about it, we will certainly not be safe in ignoring the possibility that the Nation will face a general war of the more traditional and sustained type. Of course, I am in no position to give you an opinion as to which of these different assumptions is correct, if any of them are. But I can say that none of us would want to gamble our defense, and perhaps future existence, by relying entirely on opinions that indicate the next war would be over quickly. I am sure if we planned for it that way, it might very well be that way, with most unfortunate results.

Therefore, on this entire subject of mobilization requirements for transportation, I can only proceed on the historic facts and attempt to appraise them realistically. Doing this, I find that population in the United States has increased more than 31 percent over 1943 when, under wartime conditions, the total intercity ton-miles of freight represented an average per capita volume of 7,681 ton-miles. On this basis my general conclusions are as follows:

(1) For all modes of transportation, intercity freight tonnage in a sustained mobilization period would, in my opinion, aggregate at least 1.36 trillion annual ton-miles. This assumes a civilian economy on the same austerity basis as in World War II, which was very much below today's living standards.

(2) Assuming the railroads would be expected to haul the same proportion of this tonnage as in 1943, or about 71.3 percent, my industry would be expected to handle a total of almost a trillion annual ton-miles. This assumes liquid fuel availability for nonmilitary use at much more than the World War II volume. The greater mechanization of today's civilian economy requires this if the same proportion of the overall job is to be done with these fuels as during World War II.

(3) I cannot see the railroad industry with its present plant, motive power, freight cars, and available personnel being able to move more than approximately 750 billion ton-miles on an annual basis. This just about equals what we handled at the World War II peak when we had more equipment and more extensive road facilities than we have today.

In other words, it is my conviction that the railroads would fall short by more than 200 billion ton-miles in handling the volume of freight traffic under sustained mobilization conditions which other modes could not handle. This deficiency would be in excess of 20 percent. The situation with regard to passenger traffic would be far less satisfactory than in the case of freight. I will have a great deal more to say about this at a later point, but it is not possible to summarize the passenger situation in the same concrete terms.

TRANSPORTATION CONDITIONS IN GENERAL

Turning again to my exhibit,[1] I would like to begin by presenting certain facts on the transportation industry as a whole. We must get this picture before us at the outset in order to place the railroad industry in its proper setting. Page 3 presents current figures showing employment in the transportation industry as compared with total employment. The last column shows that total direct employment in transportation represents 11.6 percent of the employed labor force. Adding employment in allied industries there is a total of more than 10 million jobs shown at the bottom of column 3. This is 15.6 percent of the total employed labor force, as shown at the bottom of column 5.

The transportation industry represents a vast investment of funds in addition to this large investment of human effort in the way of employment. Page 4 gives this investment data, shown graphically on page 5. Its extent is emphasized by comparison with public debt. Note on line E of the table that total gross investment amounts to almost $285 billion, of which the Government has provided over $69 billion, all for modes other than rail.

Annual expenditures by the American people for transportation are shown on page 7. In 1958 this amounted to $84.8 billion (line E), the equivalent of 19.4 percent of the gross national product for the year.

In spite of the great extent of investment in, and use of, transportation in our country, the fact is that the commercial phases of transportation have not prospered over the last three decades as other industries have. Page 8 shows the changes, since 1929, in total U.S. population, production, and transportation volume. With an increase of 40.5 percent in population by 1957, total industrial mining, and agricultural production rose by a weighted average of about 113 percent. Freight volume by all modes, public and private, has more than kept pace, while passenger volume by public carriers went up only 79 percent.

Page 9 charts total corporate sales in transportation and in all other industries since 1929, based In Department of Commerce figures. While the gross sales of other industries rose by almost 400 percent, the increase in transportation revenues was only 176.3 percent.

Page 10 shows trends in corporate profits after taxes for transportation and for all other industries. Here you will see that, while other industries increased their earnings after taxes by almost 190 percent, transportation suffered a decline of substantially 50 percent. The reason for these low earnings in transportation on increased volume is shown on page 11. Note that the wholesale price index for all commodities had risen to a point 90 percent above 1929, while transportation revenue per passenger-mile was up an average of only 2.4 percent and revenue per ton-mile, 61.5 percent.

The reason for the lag in transportation pricing is, generally, the fact that the largest component of the transportation figures is railroad rates and fares. These have been held down artifically because railroads during more recent years have had to compete for business with other forms of transportation whose pricing does not reflect the full cost of their services. They are relieved of many costs by Government policies, which I will discuss in more detail at a later point.

In fact, the average revenue of railroads has increased less percentagewise than in the case of transportation generally. These facts are shown on page 12 for my own railroad, and are charted on page 13. Our average revenue per ton-mile in 1957 stood 52.5 percent over 1929, as compared with more than 61 percent for all transportation. Further evidence of the squeeze on railroad earnings is also shown on these pages. Our average wage rates in 1958 were practically 3½ times their 1929 level, and our material prices almost 2½ times. You see on these pages some

[1] See attachment to transcript.

basic reasons for the present highly unsatisfactory financial condition of the railroad industry.

This further appears on page 14, giving net investment, net railway operating income, and the computed rate of return, for both class I railroads and the Pennsylvania Railroad. While the net investment has increased, the rate of return on that investment has gone down for the industry generally and has been especially low in the case of the Pennsylvania.

Since World II my company has had a return of as much as 3 percent in only 2 years. In 6 years it has been less than 2 percent and last year was below one-half of 1 percent. In fact, the Pennsylvania had rates of return during the depression years of the 1930's at a generally better level that we have had since World War II.

You can see on this table one important difference between the preparedness situation of the railroads today as compared with World War II. Column 2 shows that the railroads kept their net investment during the depression years of the 1930's substantially up to the 1929 total. By contrast, the railroad net investment since 1940 has increased only by 10 to 15 percent. In view of the huge price inflation during that period, this change in net investment actually represents a decrease in terms of physical units. As a result, the railroads today do not have the excess capacity for traffic expansion which they had to a substantial extent with the coming of World War II.

The relative position of the various segments of the transportation industry with respect to earnings is shown clearly on page 15. Here there is summarized the rate earned on net assets—total capital stock plus surplus—of different corporate groupings. Note especially the last two lines on the table showing the rates for 1958 and for the average of the last 5 years. Nonregulated industries, such as manufacturing, have earned a return averaging as high as 12.8 percent. Regulated public utilities, other than transportation, have been earning an average approaching 10 percent. These regulated public utilities are true monopolies and as such do not face direct competition.

Important segments of the transportation industry—principally the railroads—are regulated as monopolies, although competition is as vigorous here as in the nonregulated industries. The average rates earned over the last 5 years by the different modes are: miscellaneous transportation including trucking, 11.6 percent; air, 10.1 percent; and shipping, 9.4 percent. The class I railroads, by contrast, have averaged only 4.7 percent, which is below all other industrial groupings shown. This, of course, is an industry average. The last column of the table gives the comparable figures for the Pennsylvania Railroad. In the last 10 years we have earned a return on this net asset basis of as much as 3 percent only once, while last year our rate fell to only one-tenth of that.

All of the information presented on present business conditions in transportation establishes that railroads are the weakest segment from the standpoint of financial strength. The railroad industry is not now, and has not been for a long time, in the kind of strong financial condition which would allow it to be prepared for a sustained and substantial increase in traffic output under emergency conditions.

RAILROAD INDUSTRY CAPABILITIES

Having considered these basic conditions in the entire transportation industry, we can now turn to the available data showing the present capabilities of the railroads. I will present this subject from the standpoint of road facilities, motive power, freight cars, passenger cars, suburban services generally, and manpower. At this point, we will cover the salient facts in these categories. After the facts have been presented, I will give an overall summation of the industry's maximum capabilities.

Road capabilities

Page 17 of the exhibit shows, both for class I railroads and the Pennsylvania Railroad, statistics on road and track mileage, train-miles operated over these facilities, and the rate of utilization. You will see that each item on the table is indexed to show the relationship of the annual totals to the figures for 1944, the peak war year. Miles of road and of track have declined. In columns 14 through 17, showing train-miles, you will observe substantial decreases from the 1944 peak. The last four columns show road utilization in terms of train-miles per mile of main track. During recent normal years, the class I utilization has been at about two-thirds of the rate in 1944, while the Pennsylvania's has been in the neighborhood of 60 percent or lower.

On page 18 we show the declining portions of road mileage used in the passenger service—summarized in the last two columns—contrasted with the use of substantially all mileage for freight. All of these decreases in passenger utilization of railroad mileage have been steady and continuing, and this crucial process is even now going on at an accelerated rate, as anyone will know who reads the newspapers.

The decline in passenger service is further demonstrated on page 19. This gives annual train-miles in freight service and in passenger service. Note also the very substantial decline in freight service train-miles, to a level in recent normal years approximating two-thirds or less of the volume in 1944.

Pages 20 and 21 show, for the class I roads and the Pennsylvania, respectively, traffic units, combining revenue ton-miles and passenger-miles on an accepted basis. The last two columns give the average of these traffic units per mile of main track operated. On this basis main track utilization has averaged about 75 percent of the 1944 peak during recent normal years for the country as a whole. Exemplifying the situation in eastern territory, the Pennsylvania's recent normal utilization has declined to less than two-thirds, and was below 52 percent of the 1944 rate only last year.

While these average figures indicate a substantial unused road capacity, it must be emphasized that increases in traffic loads during wartime do not occur uniformly on all railroad lines. The next six pages of the exhibit show what actually happened on the Pennsylvania during World War II, by contrasting 1940 and 1944 traffic loads. Page 22 lists our east-west main lines and shows in the last two columns the increases in gross ton-miles. The map on page 23 furnishes a key to these lines, on the basis of the numbers in the second column of page 22. Note, in column 18, the substantial increase in gross tonnage occurring on each of these lines. Pages 24 and 25 give information on our north-south main lines where similar increases occurred. By contrast the branch lines, covered on pages 26 and 27, had decreases in the majority of cases with comparatively modest increases in the remainder.

Motive power capabilities

Having completed the discussion of railroad capabilities from the standpoint of track facilities, we can now turn to the equipment situation. I will first cover motive power.

On pages 28 and 29 you will find tables giving basic statistics for the class I roads and for the Pennsylvania. These show locomotive ownership by types of units, together with average tractive effort, yearly retirements and installations, average number of units not in service, total locomotive-miles and average daily mileage in freight service. Columns 2 and 4 indicate the extent to which older forms of motive power have been replaced with the modern diesel units.

The columns showing units not in service are particularly significant. They indicate a substantial number of locomotive units available but not in service during the 1930's and even during the years of World War II. Contrast this with the recent substantial decline in unused power capacity. The last column shows the steady increases in daily use of active freight locomotives, reflecting largely the greater efficiency and availability of the new types of power. All of these statistics emphasize the railroad industry's program of tailoring their equipment ownership to current normal business requirements. This has been necessitated by business and financial factors which we will consider further at a later point.

On page 31 you will find a chart which shows graphically the overall decline in number of motive power units and the change from steam to diesel. This indicates the decline of locomotive capacity as contrasted with the situation during World War II and the earlier depression years.

Pages 32 and 33 give additional important information on motive power capabilities. The first of these pages, in columns 2 through 5, gives the total tractive effort of all locomotives at year end. The next four columns indicate the aggregate trailing gross ton-miles. The last four columns show average trailing gross ton-miles handled annually by each pound of tractive effort, indexed on the basis of 1944. The chart on page 33 shows this latter information graphically. This index of locomotive output shows that the modern types of power are capable of somewhat better performance than those in use during World War II. Thus, the average output for 1956 exceeded the 1944 peak.

The chart illustrates a substantial increase in locomotive output from the postwar low in 1949 to the peak in 1956. This should be explained. These average performance figures are based on all locomotives, including units temporarily

withdrawn from service either for storage or major repairs. In 1956, the number of locomotives not in service was at a postwar low, but further reductions in this respect have taken place since. Furthermore, the average output is affected by length of trains and by general availability of the motive power in use. Both of these factors in 1956 were at a high level.

The significance of this information is that it shows the recent decline in excess or standby motive power, and the substantial capacity use of such power during current normal business. In fact, with the locomotives presently available to the industry, we would face difficulties in achieving the output levels of 1956.

Freight car capabilities

We can now turn to consider another very important indication of overall railroad capabilities—namely, the freight-carrying car situation. Pages 34 and 35 give basic statistics on this. The first group of columns show ownership at the end of each year expressed in number of cars, aggregate and average tonnage capacity. While the total freight cars of all class I railroads have not varied drastically since the 1930's, there has been a general upward trend since 1950 in the aggregate and average tonnage capacities.

The next two columns show retirements and installations. Here, there has been very wide fluctuations from year to year, due to the drastic periodic changes in railroad freight traffic and earnings.

The next two columns give the average monthly number of freight cars in need of repair and the corresponding percentage of the current ownership. These indicate the existence of a significant backlog of cars prior to World War II which could be put in service promptly by ordinary repair procedures. No such large reserve has existed in the years since World War II, although from time to time business conditions in the industry have led to higher-than-normal levels of bad-order cars.

The last four columns on page 34 show the maximum and average number of cars surplus and cars short in each of the years. Note especially the very large maximum and average surpluses in the years prior to World War II and the practical absence of any shortages. At that time, the railroads were capable of meeting increased traffic demands both because of these surpluses and the substantial backlog of bad-order cars. However, beginning with World II and continuing down to the present time, there have been shortages of freight cars in every year, while the number of surplus and bad order has been modest in amount by comparison with pre-World War II conditions.

These general statistics on freight cars do not tell the full story. For example, you will note there may be shortages and surpluses of cars at the same time. This is explained by the fact that shippers require different types of cars and, while there may be a surplus of one type, the demand for other types may exceed the supply. For example, page 37 shows the classification of freight-carrying cars owned by the class I railroads. The principal classes are box, flat, stock, gondola and hopper, tank, and refrigerator. As you will observe the vast bulk of railroad freight business is hauled in cars classified as box, gondola, and hopper. Even these groupings must be further divided to reflect special uses. For example, about 54,000 of the boxcars are specially equipped to handle particular types of lading. The same situation applies to many flat cars, as well as gondolas and hoppers.

Turning to pages 38 and 39 you will see significant operating statistics on the performance and use of freight-carrying cars. On page 38 the table shows for the period 1939 through 1958 the net and revenue ton-miles of freight hauled, revenue tons carried, revenue car loadings, freight car miles separated between loaded and empty mileage, and total train miles in freight service. The trends in these totals through the war and postwar years furnish an overall indication of railroad performance and capabilities under varying conditions. On the opposite page there is shown for the same period, freight service operating statistics based on average performance and utilization. These figures provide an important basis for estimating the maximum overall freight capacity of the railroads. While they show some areas in which improvements could be made in utilization, they also demonstrate that railroad efficiency and productivity has increased in many respects over recent years. In these respects, extensive additional capacity cannot readily be made available for emergency conditions.

Passenger car capabilities

The next phase of equipment to be covered will be the passenger cars. Page 40 gives the total of all passenger train cars owned by the railroads and the Pullman

Co., separately for different types. You will note in the last column that total ownership in 1929 was in excess of 63,000 cars, as compared with a wartime peak of over 47,000 cars in 1945, and present ownership of little more than 32,000 cars. Page 41 shows comparable information for the Pennsylvania.

Pages 42 and 43 contain selected statistics on passenger-train cars. The left side of each page shows data on passenger-carrying cars, and the right side for all passenger-train cars, including head-end. Especially noteworthy is the decline in total ownership from World War II levels, particularly in the case of the Pullman Co., which represents sleeping cars. An even greater decline has occurred in carrying capacity, because modern coaches are designed for greater luxury and space, while the sleeping cars bought since the war have been almost exclusively room type rather than open section cars with berths.

Beginning with the year 1950 to the present time you will see that retirements have exceeded installations by increasingly greater amounts. The monthly average condition of cars from the standpoint of needed repairs has also deteriorated. In recent years the railroads have been experiencing greater and greater diversion of passenger traffic to the airlines.

Many companies simply cannot afford to spend money for current repairs, solely to provide a standby facility when planes are grounded because of weather conditions. As a result, my own railroad and many others have adopted the policy of keeping passenger cars serviceable only to the extent needed for normal business.

The exhibits on pages 44 and 45 state certain average operating statistics in the passenger service. In general, you will note the railroads are handling far fewer passengers per train than during the war. Bear in mind that these statistics cover all types of passenger service, including branch line and commutation operations.

In order to highlight the general passenger equipment picture, I will cite some recent situations on my own railroad. As stated before, we are generally keeping our passenger equipment in condition only to meet normal traffic demands. However, we do have special traffic demands over holidays and at other times, and what we do to meet those conditions is attempt to borrow cars from other railroads. In the movement of young people to summer camps around July 1 this year, we found it possible to borrow from 7 other railroads a total of 50 sleepers which just about enabled us to handle this special movement. Actually, we had to retain these sleepers to serve as coaches during the peak travel over the Fourth of July weekend.

We would very much like to have had additional cars at that time but we found it impossible to obtain them.

As a matter of fact, we are now in the position on the Pennsylvania where we should have approximately 175 additional coaches to handle holiday and special party traffic peaks, except during the Christmas period. To accommodate passengers properly over the Christmas holdays we could use at least an additional 250 coaches. I want to emphasize that this covers only the problem on my own railroad.

This situation is very unsatisfactory from our standpoint, but we cannot see our way clear, under our present financial circumstances, to add to our passenger fleet additional cars for which we would not have regular and daily use. This hurts us considerably because we realize that substantial revenue is being lost. For exampie, the Shriners' convention was heid the week of July 5 at Atlantic City, and we lost a total of nine trainloads of business simply because we were not able to borrow the cars needed for this movement. On a fairly regular basis we have to forgo possible revenue of this type simply because we do not have, and cannot borrow the necessary cars. In fact, during 1 recent month it is estimated that we had to decline extra service passenger business that would have produced gross revenues to us of approximately $650,000.

I offer these examples only to show that our present passenger fleet is inadequate to handle occasional peak movements. Of course, the revenues we would receive from the traffic we are unable to handle would be entirely insufficient to justify the purchase of costly new equipment in order to provide a reserve capacity to cover these special situations.

Showing graphically what has been happening in the passenger service over the years are the maps on pages 46 and 47 which chart the density of passenger train operations on the Pennsylvania, contrasting 1929 with 1959. A glance will show you that passenger service on most of our branch lines has disappeared, while the number of trains on the main lines has drastically declined.

Suburban service

The special situation represented by the suburban service should be separately considered. Pages 48 and 49 are similar Pennsylvania train density maps covering this special type of service. These show that suburban operations in the Pittsburgh area have almost disappeared, while in the Philadelphia and New York areas the operations have been confined more to the immediate metropolitan areas where they have actually increased on some lines.

With respect to national statistics on sururban service as such, none is available from existing records. However, on page 51 there is a table showing the number of commutation passengers and commuter passenger miles, which make up a large portion of this service. Note particularly the very definite increases in commutation patronage incident to World War II and continuing to a peak in 1947.

This demonstrates the extent of public reliance on this service at times when private automobiles cannot be used or purchased.

Conditions in suburban operations as between different railroads present wide variations, and it would be more meaningful if we consider some phases of this business on my own railroad.

Pages 52 and 53 show, statistically and realistically the volume of revenue passengers on the six Philadelphia suburban lines. You will note the extent to which the public depended on our suburban operations during World War II. We could not then, and we cannot now, handle any such volume with our regular suburban electric equipment. We were able to do so in the war years because many defense plants on these lines, particularly the one to Wilmington, were working around the clock and 7 days a week. This permitted a much more extensive use of the suburban electric equipment, but we also had to place in this service regular passenger coaches with electric locomotives.

On pages 54 and 55 we have charts showing the density of suburban passenger travel in the Philadelphia area by hours of the day, stated separately for weekdays, Saturday, and Sunday. These pages contrast the situation in identical periods of 1940 and 1958. Our chief problem here is that the traffic is becoming more and more concentrated in the daily rush hours, Monday through Friday. This leaves idle, for greater portions of the day, the available equipment and the crews under pay. In fact, almost 80 percent of our special suburban equipment is in service only for 20 hours a week.

The remaining phase of railroad capability is the manpower picture. Page 56 indicates the average number of employees, total gross ton-miles, and the average gross ton-miles per employee. The war years were not as high in railroad employment as 1929 and 1930, but gross ton-miles reached a much higher level in the year 1944. As a result, the gross ton-miles per employee during the war reached levels never before attained.

This process of ever-increasing efficiency was spurred on by the military necessities of World War II. But you will note that the same process had to be continued, because of severe competitive and financial pressures, in the years since. In fact, the class I railroads in 1958 were handling nearly 20 percent more gross ton-miles per employee than they were in 1944, while on the Pennsylvania this increase amounted to 13 percent. I might point out in passing that the difference here is accounted for primarily by the character of operations, including length of road haul, relative amount of terminal switching, and passenge· services as well as other similar factors. In any event, if the railroad industry had adequate financial resources for investing in presently available technological improvements, this index of efficiency would show an even further and marked increase.

On page 57 there is a table placing railroad employment in the overall picture of national employment and manpower. The high employment of 1,420,000 men by the railroads in 1945 has steadily declined to a present level of about 840,000 or less than 60 percent of the wartime total. Meanwhile, total civilian employment in the United States has increased 22 percent from less than 55 million in 1943 to more than 66 million today. This contrast is highlighted in the bottom portion of the exhibit where, in the last column, you will see that railroad employment has fallen from 2.2 percent of the total labor force to only 1.2 percent at the present time.

From the standpoint of mobilization requirements, another important factor is that the railroads, with their smaller working force, would not be able to expand employment as they did during World War II. This was possible only because of the large number of unemployed persons at that time. In other words, any substantial increase over present railroad traffic levels would involve the difficult task of finding qualified additional employees, and the equally difficult task of training them.

An indication of the seriousness of this problem will be found on page 58, which contains data on labor turnover in the case of the Pennsylvania. Our working force last year fell to the lowest level since records have been kept, averaging less than 81,000. The kind of problems we would face in the event of national mobilization can be appreciated by noting the trends during World War II.

From 1939 to 1944 we had to increase our average number of employees from less than 100,000 to over 164,000. This meant, for example, that we had to hire more than 130,000 in 1942, the equivalent of 86 percent of our average force in that year. Modern efficiencies in railroading would permit us to expand our operations substantially without increasing our employment at the same rate as during World War II. Nevertheless, we must recognize that today far fewer persons are seeking employment and the potential for hiring is, therefore, drastically less than it was.

In addition to the problem of hiring employees in adequate numbers to permit handling of increased traffic, we would face the additional difficulty today of having to select persons with higher skills. Page 59 contains selected data for the Pennsylvania Railroad, indicating the upgrading of skills in the railroad industry. For example, the general clerical employees, designated as B and C clerks, constituted more than 62 percent of the clerical group in 1944, but only about 57 percent of that group in May of this year. By contrast, the higher skilled mechanical device operators rose from a proportion of 2.7 percent of that group in 1944 to 4.1 percent in May of 1959.

Even more startling changes have taken place in the maintenance of way and maintenance of equipment groups. The unskilled section and extra gang men constituted almost 64 percent in the maintenance of way group in 1944, but are only about 43 percent this year, whereas the more skilled portable equipment operators rose from a ratio of only 3.5 percent in 1944 to 10.3 percent in May 1959. In the maintenance of equipment group, the skilled employees constituted less than 48 percent of the entire group in 1944, but were nearly 59 percent this year. By contrast, the unskilled classifications declined from 38.8 percent of the total to only 24.6 percent. These statistics clearly show that railroads would have a much more difficult task in accomplishing the necessary expansion in labor force during a new mobilization period, due to the fact that we increasingly require skilled and experienced employees.

I do not want to leave the impression that the manpower phase of railroad mobilization problems is without any effective remedy. Without going into the details of what some people regard as a controversial subject, I cannot avoid stating that considerable improvement in railroad manpower efficiency is possible and, I firmly believe, must be achieved within the very near future. Today railroads are subject to labor agreement working rules which needlessly and wastefully restrict the proper use of our employees. Many of these rules date back to periods prior to World War I. The art of railroading, and transportation conditions generally, have so drastically changed during the past half century that conditions of this type are really a national scandal.

Causes of reduced capabilities

Before stating my opinion as to the overall capabilities of the railroad industry, we should consider some figures showing how presently reduced capabilities have developed. On pages 60 and 61, we show trends in capital expenditures over the period 1925 through 1959. The first 5 years have been summarized in a line showing the average for this predepression period. The entire statement has been indexed on that basis.

Columns 2 through 7 give the actual dollars spent for capital purposes, separately for equipment and roadway. Note here that, since World War II, the increase in current dollar expenditures has been entirely for equipment, while expenditures for road have declined significantly from the average of the late 1920's. This factor, you will note, is even more noticeable on page 56, in the case of the Pennsylvania.

Columns 8 through 13 restate this same information in terms of 1957 dollars to eliminate distortions resulting from inflation. Even with this adjustment to show the actual volume of capital projects, class I equipment expenditures since World War II have been generally higher than in the base period, while investment in road has been only about 40 percent or less. In fact, road expenditures in 1958, when adjusted for price increases, were less than at the lowest points in the depression years.

In passing it should be noted that the higher level of capital expenditures for equipment in recent years does not indicate any significant increase in capacity.

This has appeared in detail in other statements. The higher level of equipment expenditures is, of course, accounted for largely by the broad program of replacing steam locomotives with newer forms of power.

On page 61, we see that the Pennsylvania has not succeeded in keeping its equipment expenditures at the same high level as the industry generally, and that our road program has had to be held to a much lower level. This condition on the Pennsylvania, I might add, is generally typical of the eastern railroads, including many which have not been able to perform in this respect as well as my own company.

In the overall picture, neither the class I railroads nor the Pennsylvania have been able to carry out capital projects in recent years at anywhere near the pre-depression level. This very disappointing situation is highlighted by comparison with the last four columns, which show that freight traffic volume in recent years has equaled or exceeded the level of the late 1920's, while passenger volume has, of course, declined. The level of capital spending simply has not been adequate to keep the property in desirable condition even for this volume of business. Clearly, the maximum effort which the industry was able to finance could not put the railroads in a condition to handle a significant expansion to meet emergency situations.

Page 63 contains statistics on materials used in track maintenance by the Pennsylvania. This gives the number of cross ties, tons of new and secondhand rail, and of commercial ballast installed. While the life expectancy of crossties has been drastically increased, the number replaced in recent years is obviously far below desirable levels.

The most drastic decline in maintenance materials occurred in the case of new rail. The average tonnage during the 5 years ending with 1959 will be less than 15,000 as compared with over 228,000 in the late 1920's. This is an austerity condition which cannot help but have its effect over the long term. If the traffic load is noticeably increased over present levels, it will be necessary to make up for these deficiencies.

Pages 64 and 65 give additional information on crosstie and rail programs, and relate these items to gross ton-miles and to mileage of track maintained. On the basis of traffic, you will see that the number of crossties installed per million gross ton-miles appears in column 6 of each table. The class I railroads, in the years 1929 through 1933, installed about 40 crossties per million gross ton-miles. but since 1945 this figure has never exceeded 20 and in 1958 was less than 10. Page 65 shows that these figures in column 6 were on a generally lower basis for the Pennsylvania. During the earlier years, this was due primarily to the greater traffic density on our railroad as shown on pages 20 and 21. The more recent figures were low also because of lack of funds. In fact, this latter situation would be more unsatisfactory were it not for our advanced methods of track maintenance on the Pennsylvania.

Page 67 gives similar information on deferred maintenance of equipment. This includes the number of locomotives in need of repair, the number of bad order freight and passenger cars, together with the estimated cost of making our equipment maintenance program current. The total of $86 million for this purpose—almost entirely for freight and passenger cars—represents the amount of money which we would have to spend now to place our equipment fleet on a normal maintenance basis. This information is shown as of June 1 this year at which time our bad-order freight car situation had somewhat improved as a result of retirements made incident to the large car building program we have underway. As that program goes forward during the remainder of the present year, another 11,500 of our bad order freight cars will be dismantled.

I might conclude reference to these items of deferred maintenance by pointing out that, as a matter of priority, my company must devote any additional available maintenance money primarily to the equipment program. We are making some progress on this phase during the present year. This priority in reducing deferred maintenance is dictated by business necessities.

Pages 68 and 69 summarize road abandonments since the close of World War II. You will see that the railroads have reduced their road mileage by more than 7,300. In the case of the Pennsylvania, this figure is 168. Page 69 indicates our track abandonments aggregating 1,844 miles. There is currently programed the additional abandonment of 625 track-miles. Other facilities abandoned include stations, enginehouses, and other structures, aggregating 1,235 units, with an additional 460 units now programed.

The extent of this abandonment program on the Pennsylvania is emphasized at the bottom of page 69 by the ledger values covering both past and programed

abandonments. Since World War II we have taken out track and other facilities having a ledger value of almost $66 million, while our currently scheduled program will add more than $26 million to this figure.

Of course, the replacement costs at current values would be many times the dollar amounts shown on the sheet.

Summary of capabilities

In order to bring together briefly all of the facts which have been presented on railroad capabilities, I would like to summarize for you what I believe our real potential is under present conditions.

1. Road facilities should be able to handle a traffic increase to mobilization levels, provided a program is initiated promptly to reduce deferred maintenance and keep it current.

2. Present motive power, with the additions now programed, operating under wartime conditions, should be able to handle traffic to the limits permitted by the preent car fleet.

3. The present freight car fleet, if cars are more promptly loaded and released, should be capable of handling over 40 million annual carloadings. Maximum weekly carloadings might exceed 880,000, under these ideal conditions. Overall, it is estimted that the railroads could handle approximately 750 billion annual revenue ton-miles, if their present fleet of freight cars were in good order and were utilized at World War II levels of efficiency, including heavier loading. These estimates, of course, do not take into account such damage to the freight car fleet as might occur under attack conditions.

4. The passenger equipment, including suburban, now cannot handle special peak movements satisfactorily. Some additional capacity would exist under wartime conditions, but far short of probable demands.

5. From the standpoint of manpower, there is some elasticity, but only enough to handle traffic increases in moderate amount over present levels.

The overall picture is clear. The ruling limitation on railroad capabilities lies primarily in the equipment area. Any increases in freight traffic, over current good business levels, could be accomplished only through increased car utilization, involving heavier loadings and more prompt releases of cars. In much the same way, a large increase in passenger traffic could be accomplished primarily only by crowding people into the available equipment and forcing travel at present offpeak hours.

Mobilization demands on transportation

I have already emphasized that my consideration of traffic demands under full mobilization conditions must necessarily be based on historic facts. This naturally involves the assumption of wartime conditions, continuing over a considerable period of time, and approximately of the character experienced in World War II.

To make the assessment on this basis, it is first necessary to review the pattern over a period of years, in the distribution of total intercity freight and passenger traffic among the various modes of transport.

Freight traffic

On pages 70, 71, 72, and 73 of the exhibit we have collected in various forms the information as to the distribution of intercity freight traffic among all types of carriers over the years since 1929. Page 70 shows the figures in ton-miles, given graphically on page 71. Page 72 shows the percentage distribution of total traffic handled by each mode, and page 73 provides an index of the ton-miles by each mode on the year 1944 as 100. Included are not only public, but also private, carriage of commodities.

Looking first at page 71, you can observe graphically the tremendous growth of freight carriage by modes other than rail during the years following World War II, and the absolute decline of rail volume in the face of a tremendous expansion of total freight traffic.

The percentage figures on page 72 show that the railroads of the country handled more than 70 percent of total traffic in the early years through 1934, their share declining to a prewar low of about 61 percent in 1940. This rose to a peak of 71.3 percent in 1943 and has since steadily and precipitously declined until it reached a postwar low of 45.3 percent of last year.

For our present purposes the index of ton-miles shown on page 73 is most significant. The rail ton mileage more than tripled from the depression low point of 1932 to the wartime peak in 1944. In normal postwar years the rail tonnage has fluctuated between 80 and 90 percent of the 1944 volume.

As shown on page 70 this normal postwar railroad volume has been between 600 and 655 billion ton-miles. If a new period of mobilization were to duplicate the experience between 1940 and 1944, it would mean that present tonnage figures would be substantially doubled, involving total freight tonnage of something in excess of 1.3 trillion ton-miles.

However, assuming that a new national emergency would not bring the same relative increase in total intercity ton-miles as occurred with the coming of World War II, I estimate that the freight traffic demands on the railroads in a new emergency would increase the current normal level of traffic by about 50 percent to almost a trillion ton-miles. I believe this is a conservative estimate. As I have established earlier, the railroad industry today simply does not have the potential to increase its freight capacity to any such extent.

Additional details appear on pages 74 and 75. These show annual freight carloadings and originated freight tonnage by various commodity groups. The figures give a helpful indication of the potential increase in demand for rail freight service in connection with certain commodities. Page 74 shows that coal carloadings increased substantially from 1939 to 1944, and the same thing occurred in the case of coke, ore, and miscellaneous carloadings. On the other hand, loadings of grain and grain products show a steady increase with the World War II volume continuing substantially to the present time. This, of course, is governed by population increases.

The tonnage figures on page 75 follow generally the same trend, except that wartime efficiency in carloading permitted greater increases in tonnage than in cars loaded. While some commodity volumes could be expected to decrease somewhat in a future emergency situation, there is no doubt that rail car and tonnage demand in connection with other commodities would substantially increase.

On the basis of all of these factors, it is possible to estimate the potential wartime demand upon the railroads under sustained full-mobilization conditions. For this purpose, we will take the overall traffic situation in the typical war year of 1943 as a basis. At that time the per capita volume of intercity ton-miles was 7,681 and this reflected only the population residing in the continental United States.

Taking the increases in residential population from 1943 to the present time, which approximates 31 percent, and applying it to the total intercity ton-miles in 1943, we arrive at total freight transport demand of approximately 1.36 trillion ton-miles on an annual basis.

If the railroads were expected to handle the same portion of this total as in 1943 or about 71.3 percent, the total wartime demand on the railroads would be about 965 billion ton-miles a year. This would involve freight carloadings of over 50 million on an annual basis, with a maximum weekly loading demand of approximately 1.1 million.

One factor is extremely important in connection with these projections. Freight traffic fluctuates considerably throughout the year in response to various seasonal changes. Page 76 gives rail carloadings by weeks for selected years, and the same information is indexed on page 77. This data is presented graphically on pages 78 and 79.

Note particularly on page 78 the sudden and large increase in weekly carloadings which occurred in 1939 when the war began in Europe. On the same page, you will see that even during 1944 there were substantial fluctuations in weekly loadings. Page 79 charts these conditions during the Korean action, the post-Korean peak year of 1956, and the present year to date. Under all of these situations, the fluctuations have been substantial, and the highest level in 1959—representing present normal capacity, is significantly below the earlier years.

Passenger traffic

We turn now to potential demands for passenger services under wartime conditions. Pages 80, 81, 82, 83, and 85 show, in various forms the figures on intercity passenger traffic by all modes of transportation, including private, on substantially the same basis as those for freight.

The first group of columns on page 80 show passenger-miles by private transportation, the next five columns by for-hire transportation. The two final columns give total passenger mileage and U.S. population.

The startling division of this traffic among modes is shown graphically on page 81.

For-hire transportation of passengers has remained below World War II levels, while there has been an astounding increase in the volume of transportation by

automobile. The truly disturbing situation revealed here is that, with the coming of World War II, a tremendous increase in for-hire transportation occurred with an accompanying substantial decline in private automobile transportation.

Note, particularly on page 80, that 79 percent of the total increase of 94 billion for-hire passenger-miles had to be absorbed by the railroads. If anything like this experience were to happen in a future emergency, the demand for rail passenger service would far exceed any amount which could seriously be considered possible.

Unfortunately, there seems to be no available answer to the problem presented by these statistics. During the postwar years, the airline portion of for-hire passenger transportation has increased tremendously and now exceeds that handled by the railroads. This is particularly evident if you will glance at page 83, showing in column 7 that the airlines are currently handling about 12 times their passenger mileage in 1944. The railroads are now handling less than 25 percent of their wartime peak load.

At the same time, it is well known that in a war emergency a substantial number of commercial aircraft units and crews would be immediately diverted to direct military service. Accompanied by the inevitable decrease in private automobile transportation, a truly fantastic demand for rail passenger service is indicated in a future emergency.

In this intercity passenger transportation picture we are confronted with a mobilization situation to which I am afraid there is simply no answer. I think this explains the notable absence of any official planning on the subject. Just what this country would do to move people about in a future emergency is beyond comprehension.

And yet, when such an emergency occurs, there is no doubt that substantial numbers of people will have to move. If the Government expects the railroads to move them as in the last war, most people will have to ride in boxcars. This passenger dilemma is the most striking example of the results produced by the poorly conceived policies of Government, with regard to transportation and its relationship to mobilization.

We have now developed a number of facts. First, the physical capabilities of the railroad industry are now at an alltime high and are still growing. Third, major reliance in a future emergency must again be placed on the railroads, despite their present serious deficiencies for that job. In order to understand what must be done—both immediate and long range—to solve this critical problem it is first necessary to consider certain factors bearing upon it.

Rail deficiency causes

First, what are the underlying causes of this problem? The real source of the problem can readily be determined. It is simply this: Government at all levels has engaged for many years in a vast and costly program of supporting and encouraging every type of transportation other than the one type on which major reliance is placed in time of war. The Federal Government alone has numerous departments and agencies, each engaged in some phase of the promotion, encouragement or subsidization of air, highway, and water transportation.

If you will turn to pages 86 and 87 of my exhibit, you will find a summary, expressed in specific financial terms, of the general policies I have mentioned. Page 86 summarizes, from the best available sources, the total expenditures made by Federal, State, and local government in connection with highways, airways, and airport and inland waterways. This shows cumulative figures going back from the present as fas as available sources permit.

Looking at the figure at the end of the last column, you will see that these expenditures aggregate the fantastic total of almost $119 billion.

This should be contrasted with the gross railroad investment, all privately financed, totaling about $38 billion, as we saw on an earlier page of my exhibit. The railroad investment figure, of course, includes equipment, while the gross figure on page 86 is merely the Government investment in fixed transportation facilities for other modes.

On page 87 we have collected these figures separately for the 12-year period, 1946 through 1947, and also for the latter year alone. On this table we have included information designated as "User Imposts Collected."

It should be emphasized that these figures include all Federal excise taxes paid by highway users, all Federal taxes collected on gasoline used by airplanes, as well as State and local fuel taxes, license and registration fees, and toll receipts. Not all of these payments to Government are even now designated as "user charges," and some which are now so designated were treated as general revenue receipts in earlier years.

Actually, it would seem appropriate for Government to levy some general fund taxes in connection with these vast commercial investments in, and use of highway and airway facilities. However, wishing to eliminate all controversy on this subject, we have included the total governmental revenues in connection with these other forms of transportation, both personal and commercial.

In the top portion of the statement, the right-hand column, total expenditures at the Federal, State and local level are shown at almost $72 billion for the 12-year period. Tax charges were less than $61 billion, so that revenues collected from the general taxpayer had to support the program to the extent of almost $11 billion. In other words, taking these operations of the Federal, State and local governments together, an amount equivalent to 1¼ percent of all general government tax receipts was devoted to subsidizing this selective transport program.

To indicate that the situation is getting worse instead of better, the figures for 1957 are shown at the bottom of page 87. Total government expenditures in this area for that single year approached $10.5 billion, tax charges were under $8.4 billion, with the resulting deficit borne by the general taxpayer exceeding $2 billion. This clear subsidy amounted to a full 2 percent of all general government tax receipts that year.

This direct type of Government aid for certain modes of transport shows only part of the whole picture. For example, a further competitive benefit accrues to many forms of carriage from this huge Government investment in fixed plant. Since the facilities provided by Government are publicly owned, no property taxes are imposed on them by State and local taxing authorities. By contrast, the fixed railroad plant is heavily taxed for the general support of government and those levies must be paid regardless of business volume or earnings. This gives to our competitors a substantial cost advantage. For example, my company had to pay in 1958 a total of more than $13 million in property taxes solely on our right-of-way and passenger stations, although we earned last year from all our business only $3.5 million.

Reference has been made in the hearings to other ways in which Government transport policy is outmoded, unrealistic, and detrimental to the overall national interest. This broad subject has been studied in recent years by a Presidential Cabinet Committee; by the Interstate Commerce Committee of both Houses in connection with the Transportation Act of 1958; and a new study in this field, as you know, is now being progressed by the Department of Commerce. Furthermore the Senate Interstate Commerce Committee has been authorized by Senate Resolution 29 to carry forward a complete and continuing study of these questions. There is no need for me to go into these details. It is my view that these represent long-range problems of transport policy, and today we must concentrate on steps which can and should be taken immediately.

All of these Government policy factors have led to an inevitable situation which has had unfortunate results. The public financing of fixed facilities for transportation by highway, water, and air, together with regulatory and tax policies favoring these modes, has made it extremely easy for anyone to engage in modes of transportation on which major reliance cannot be placed under mobilization conditions. While all forms of transportation require a heavy investment in fixed plant, the railroads must do this with private funds. On the other hand, Government does this financing for most other modes. As a result, all that is required for engaging in these competing modes of transport is to acquire vehicles—which can even be done by short-term lease with no capital investment. Generally stated, this is a basic explanation for the vast changes in traffic distribution which you have seen on many pages of my exhibit.

Beginning on page 88 you will find a series of maps showing in graphic form the inevitable result of all these policies. Contrasting in each case the situation in 1930 and 1959, they show the vast expansion of regular intercity highway routes; the present high-speed, limited access highway system and that system as contemplated by present programs; the increase in scheduled airline routes; the expansion of inland waterway routes; and—merely to complete the picture—the vast increase in trunk pipeline facilities. The last two maps on pages 100 and 101 show the railroad system in 1930 and 1959, reflecting a decline of more than 30,000 miles of line and over 40,000 miles of track. These maps speak for themselves and require no further comment.

Military and economic factors

I will now show briefly that these Government policies have ignored sound military planning and have distorted natural economic forces. Russia, we can all agree, has been fairly successful in developing its maximum economic potential

while preserving a strong military posture. We can learn a lesson by considering what has happened to transportation in the Soviet Union.

Page 102 of my exhibit gives for selected years, from 1928 through 1957, statistics on railroad operations in the Soviet Union as compared with United States. The lower portion of the table is an index with the year 1940 as a base. Glancing at this portion of the table, you will see that Russia's railroad line mileage has increased by over 14 percent, while ours has decreased over 6 percent. Its railroad revenue ton-miles have nearly trebled while ours have not even doubled. In fact, in terms of traffic on its railroads, the Soviet Union moved ahead of us nearly 5 years ago and is now out in front by 33 percent. It is thus quite evident that the Soviet Union has continued to expand its railroad capacity by marked amounts, while the trend in our country has been exactly the opposite.

Page 103 gives even more significant comparisons for our present purposes. This shows the distribution of intercity freight traffic between different modes of transportation in Russia as contrasted with the United States. Looking particularly at the percentage figures in the bottom portion of the table, you will see that Russian railroads handled substantially the same proportion of freight traffic in 1957 and other years as in 1940, while in the United States the rail portion has declined from over 67 percent in 1945 to 46.3 percent in 1957—and that figure today is close to 45 percent. Traffic over Russian inland waterways has declined from 7.4 percent of the total in 1940 to only 5.2 percent in 1957. By comparison, the vast Federal expenditures on these tax- and toll-free facilities in the United States is reflected by an increase from 3.6 percent in 1940 to 8.5 percent in 1959. The Soviet Union continues to depend on motortruck transportation at substantially the same relative level today as in 1940; in our country the proportion of intercity traffic handled by trucks has practically doubled since 1940. In 1957, it represented over 19 percent of the total, as contrasted with only slightly more than 4 percent in that year in the Soviet Union. Note especially the substantial decline in these barge and truck ratios from 1940 to the war conditions of 1945—both in Russia and the United States.

These comparisons should be disturbing to anyone concerned with mobilization planning, because there is every evidence that Russia gives full consideration to that factor. As for economic factors, it can be demonstrated simply that our policies have generally ignored basic principles.

Page 104 of my exhibit contrasts fuel and manpower requirements in connection with the movement of 100,000 tons of freight between New York and San Francisco by various modes of transportation. The first two lines in the table compare railroad fuel consumption with other modes. They show that the same job by highway would consume more than 3 times as much fuel as by rail; in case of water, 4¾ times as much; and by air, 23 to 27 times as much, depending on the type of power used.

The last two lines on the table give comparative manpower requirements. Highway carriers would need more than 13 times as much manpower as rail; water transportation, almost 3½ times; and air transportation, a minimum of 4 times and a maximum of over 11 times as much. In a true free market economy, these facts would be very significant in distributing the freight load between different carriers. In our country, they have been obscured by the cost inequalities and other distortions resulting from Government policies. In time of war, however, they take on vastly added significance, because fuel supplies and manpower then are two of the most critical items.

CORRECTIVE RESPONSIBILITIES

We have now completed consideration of the defense capabilities of the railroads and the potential demand on them in time of mobilization, together with general factors affecting the present unsatisfactory condition. We are now ready to consider steps which should be taken to eliminate the more unsatisfactory features of the present situation. My testimony so far has made it clear that the physical capacity of the railroad industry must be increased. This includes principally freight and passenger cars, as well as upgrading and improvement of track and structure.

The threshold problem is how and by whom such steps should be undertaken. I think everyone must face up to the fact that the railroad industry itself—at least in its major components—is simply not now in a position to shoulder all, or any significant portion, of the job. I would like to show you briefly why this is so.

On page 105 is a table showing gross and net income for class I railroads, the eastern district railroads, and the Pennsylvania. In each case the statement gives the ratio of net income to gross.

You will see that gross income in all of the years since World War II has exceeded that for the year 1929. This same relationship is not true in the case of net income. While the class I railroads had net income in 2 postwar years exceeding the 1929 figure, the eastern district railroads and the Pennsylvania have remained far below the predepression period in net earnings.

The overall situation, however, is much worse than these figures indicate. As you will see, the cents per dollar of gross carried down to net income have in all cases been far below the comparable figure in 1929. Considering the wide cost inflation which has occurred during and since World War II, railroad companies should have been producing net earnings in substantially higher amounts to avoid their present financial difficulties.

The cumulative results of this unsatisfactory earnings record is best emphasized by considering the railroad working capital and cash positions. On pages 106 and 107 we show comparisons of working capital with operating revenues. In the case of the class I railroads, revenues in the 1950's have averaged in excess of $10 billion annually. Working capital, after deduction of 1-year maturities.(shown in col. 5), has averaged in excess of $1 billion. But it should be noted that railroads generally have had to draw heavily on the working capital accumulated during World War II in order to undertake the improvement programs that have been accomplished. This is shown in column 6, where the ratio of working capital to operating revenues has been reduced in some recent years to 10 percent and below as contrasted with the 15 to 22 percent in the late war years.

The situation on the Pennsylvania, as indicated on page 107, is much more unsatisfactory, and this is generally typical of the eastern railroad experience. During normal postwar years our operating revenues have held to about the level of 1943 and 1944. However, our working capital, as given in column 5, has been reduced to less than $50 million in the last 2 years, as contrasted with more than $100 million during 6 of the previous years shown in that column.

Our working capital has been less than 10 percent of operating revenues during 6 of the postwar years and in 2 of those years was less than 4 percent. When materials and supplies are deducted from our working capital figures, as shown in column 8, the Pennsylvania actually shows a working capital deficit in the last 3 calendar years, as well as in the year 1947.

In order to demonstrate that even the best working capital situation in the railroad industry is entirely unsatisfactory, I would direct your attention to the statement on page 109 of my exhibit. This shows the relationship of net working capital, after deduction of 1-year maturities and exclusion of materials and supplies, to the average monthly payroll. The last of each group of columns expresses this relation in terms of the number of months', or part of a month's, payroll which is covered by the net working capital.

For the class I railroads, this has provided less than 1 month's coverage in 6 of the postwar years. However, in the last column you will see that the Pennsylvania has actually had a deficit coverage in 4 of the postwar years and in only 4 years was average payroll covered for more than 1 month. An industry which has to operate on such a narrow and sometimes nonexistent margin of working capital is clearly in no position to finance the job which must be done to improve its mobilization posture

The situation with respect to working capital would have been so much worse as to be disastrous for large segments of the railroad industry, particularly in the East, if, during the postwar years, some of us had not succeeded in realizing substantial amounts of cash through abandonment programs and liquidation of assets. For my own railroad this is shown on pages 110 and 111. The first gives, for the period 1946 through 1958, the net increase in cash realized through our program of abandoning all facilities not needed to handle current levels of business.

In the first three columns is shown cash realized from the sale of scrap in connection with track and other road facility abandonments, plus the scrap proceeds resulting from the program of retiring equipment. The equipment portion resulted from the reduction in our fleet of locomotives and cars, and the replacement of steam power with new diesel locomotives. From these sources we netted almost $102 million in additional cash. In the next three columns, we show the equivalent of further cash generated through the use of salvage parts and material in lieu of purchasing such items new. This additional phase of the abandonment and dismantling program produced cash equivalent to more than $54 million, giving us a total of almost $156 million.

Page 11 summarized the cash realized by the Pennsylvania Railroad over the postwar years through sale and liquidation of property and investment assets.

Listed on the table are the important sales of such items, showing each case the cash realized to date. These listed items have produced cash in excess of $71 million. Adding the miscellaneous real estate sales, involving more than $39 million, we find that the Pennsylvania realized almost $111 million of cash from this liquidation program.

Together with the net increase in cash from the abandonment program, these figures mean that my company would today have a working capital deficit of almost $267 million more than the actual amount, if we had not been able to take these various steps to produce added cash. Obviously, a program of this magnitude is nonrecurring and simply cannot be relied upon to provide the essential cash resources needed for us to stay in business. More importantly for our present purposes, it shows that my company and many other railroads similarly situated are in no position to undertake and finance all the improvements in our capabilities essential to meet future mobilization requirements.

Clearly, therefore, the Nation must look to some group, other than the railroad industry, to begin the job which must be done. I do not want to be understood as saying that the railroad industry cannot, over the long term, achieve a financial position which will permit us to maintain an adequate transport mobilization posture. I agree wholeheartedly with a statement made in the report submitted, under date of April 7, 1959, by the Office of Civilian and Defense Mobilization to the Congressional Joint Committee on Defense Production, and I quote:

"The financial condition of the rails has been impaired, and they have been unable to generate capital adequate to keep their plants abreast of technological developments and traffic requirements. Remedies for this situation would appear to lie in corrective long-term transportation policies."

"Measures designed to improve the long-term financial health of the railroad industry would do more to improve the strength of the mobilization base in this industry than would any measures designed to deal specifically with identifiable physical shortages by financing standby capacity." The other witnesses for the railroad industry, I understand, will undertake to outline to you some of these necessary long-term improvements in transportation policy. I endorse this approach fully as the only really lasting and reliable solution to the problem we are now facing.

However, I think that the Congress would be ill advised to ignore the critical present situation in transportation, and to limit action to investigation and correction of the multitude of public policies which have brought about the present situation. I believe that my testimony has indicated to you the extent to which these unfortunate policies are embedded in, and widespread throughout, governmental budgets, regulatory and promotional programs, at all levels. Clearly, any real correction of these conditions will involve a far-reaching and extensive task.

Furthermore, we must be practical in dealing with these matters, and remember that any sudden and drastic change, in even the most indefensible policies, would tend to disrupt the transportation industry. I would not advocate such a result even though it might serve to place my industry in the position which the national interest requires it to occupy.

The conclusion is plain. Regardless of the need for strengthening the railroads' financial sinews, an immediate and direct step to correct the most serious deficiency in our transport mobilization posture must be taken by the Federal Government. This is appropriate, not only because the railroads cannot do all of the job alone, but also because the problem is one of paramount national importance and has at least most of its roots in past Government policy. While this is a serious responsibility for the Congress to face, you will be glad to know that this can be done without ultimate cost to the overburdened Federal taxpayer.

I will first outline the corrective action which must be taken and explain how essential that action is. Then, we will consider my proposal for a Federal program to implement that action.

THE ESSENTIAL FIRST STEP: A MODERNIZED RAIL EQUIPMENT FLEET

You have already seen that the principal bottleneck in the entire transportation mobilization picture lies in the deficiency in railroad equipment. We have reviewed in detail the extent to which the fleet has been reduced in total units, drastically in some respects, to the point where it is now capable only of handling current traffic at normal levels. In addition to the matter of mere numbers, the age condition of railroad equipment constitutes a further deficiency. I will give you now some facts on this vital phase.

Freight cars

Taking the freight car situation first, you will find revealing information on pages 112 and 133 of the exhibit. The first shows in tabular form, and the second graphically, the age condition of all freight cars used in interchange service at the end of 1957. Complete information for last year is not yet available.

Note that nearly 24 percent of the entire fleet of class I railroad freight cars was over 30 years old. Over 40 percent was more than 20 years old, which is certainly the maximum desirable age in this era of rapid technological progress.

From a realistic standpoint, railroad freight cars, generally speaking, should not be kept in service beyond 20 years. To eliminate all over-20-year cars of the class I roads within the next 10 years would involve replacement of more than 1,128,000 cars, or an annual average of more than 112,000.

In addition to these requirements, it seems evident that the class I railroad freight car fleet should be expanded. The National Association of Shippers Advisory Boards has suggested that this total fleet should approximate 2 million cars, as compared with the present 1,700,000. This suggestion is a truly conservative one from the standpoint of realistic mobilization requirements. This part of the program would involve an additional 300,000 new freight cars.

Therefore, a 10-year program, to replace overage cars and adequately expand the fleet, would involve construction of 1,428,000 cars, or an annual average of more than 142,000 new cars.

As long ago as 1948, the Office of Defense Transportation estimated that the class I railroads should begin installation of new freight cars at the rate of about 10,000 cars per month, or 120,000 each year. Because that proposal could not be implemented, the situation at the present time obviously requires a more extensive remedy. Based on an average cost per freight car of no less than $10,000 over the next decade, the annual expenditure for new freight cars should be in the neighborhood of $1.4 billion.

Passenger cars

Turning to the passenger car situation, we have information on pages 114 and 115. The table and chart show the ages of passenger train cars now operated by the railroad industry. On January 1, 1958, more than half of these cars were over 30 years old, while only 15 percent were 10 years or less.

Further information of the same type for the Pennsylvania is given on pages 116 and 117. This is shown as of January 1, this year. The figures on the bottom of the table are the percentages in each age grouping, by types of passenger cars. Note that all of our postal and baggage-mail cars are over 30 years old, and that 61 percent of our coaches and nearly 40 percent of our sleepers are in that group.

A special situation, which is extremely important in certain major metropolitan areas, is the condition of railroad suburban cars. While some improvement has been made on certain railroads operating these commuter services, the general picture is not good. On pages 118 and 119 of the exhibit we have information on the age of the suburban-commuter cars which are operated by the Pennsylvania. More than 77 percent of these cars are now over 20 years old, and every reason other than insurmountable financial problems argues for early replacement of most of this equipment.

The age condition of railroad passenger cars obviously requires correction. In addition, to prepare for future national emergencies, a number of cars should be stockpiled. At the present time, about 1,500 older sleeping cars are held by the defense authorities in such standby status. To meet emergency civilian needs, further action of this type ought to be taken.

Locomotives

As I previously explained, the railroad motive power situation is basically satisfactory from the standpoint of age. In this area, the future equipment program will have to deal with expansion to meet increased business demands, and to provide adequate service in the event of a national emergency. Of course, there will be a continuing need to replace or rebuild these relatively new motive power units, when they have outlived their usefulness from a practical maintenance and operating standpoint.

Equipment summary

You can see from all of these facts that a tremendous program of railroad equipment construction should be started immediately and carried out over the next decade. The railroads should be spending not less than $1.5 billion in each of the next 10 years to maintain, up-date and increase their available equipment. And such an effort would, in my opinion, do no more than meet the normal demands which will be placed upon the industry in our growing economy.

FEDERAL EQUIPMENT FINANCING PLAN

This enormous program of railroad equipment building must be begun without delay. The funds required to finance it will aggregate approximately $15 billion over the next 10 years. It is self-evident that the railroad industry cannot alone do the job. As I stated previously, it is essential that the Federal Government participate in meeting the financial problems involved. To show the nature and extent of that participation, I will first summarize the specific financial areas in which the railroad industry is deficient.

Rail financing deficiency

We have considered in detail the unsatisfactory earnings record of the railroad industry, and its resulting inability to generate adequate capital funds from internal sources. This is highlighted on page 121, showing book net assets and net income for leading corporation groups and the Pennsylvania Railroad.

In column 2, note that the nonregulated manufacturing industries increased their net assets, from 1953 through 1958, by 54 percent. Column 9 shows that the regulated public utilities increased net assets by over 57 percent. In the transportation industry, airlines increased 114 percent; shipping, 72 percent; miscellaneous transport, including most trucking, more than 67 percent. By comparison, the class I railroads were able to increase their net assets by only a little more than 4 percent in 6 years.

Clearly, the railroads must seek outside sources for needed capital funds. The extent of the deficiency in such sources available to the industry is indicated on page 122. This chart is a projection for the decade, 1960 through 1969, of the source and application of funds of class I railroads, reflecting cash requirements for $1.5 billion in new equipment annually.

The lower portion shows the projected sources of cash funds. The amount of cash estimated to be produced through net income is based on average earnings of the railroads over the last 5 years. Financing is projected on the basis of borrowings during the last 5 years, which have averaged $400 million. Additional evidence will show that this is a probable maximum to be expected from private lending sources. Depreciation cash is projected on the basis of capital expenditure programs already planned by the industry.

With these sources of cash, the indicated deficiency totals $9 billion. The basis for this can be found in the top portion of the chart. The major applications item is a capital expenditures program of $20 billion, based on equipment and road facility programs aggregating about $2 billion each year.

The amount shown for the payment of dividends is projected on the basis of payments over the last 5 years. Finally, applications indicated for meeting debt maturities result from an actual study made of the present railroad debt structure, including all outstanding debt which is scheduled for retirement within 10 years.

This all proves that the railroads must uncover new capital sources in substantial amounts. The fact that private capital markets will not provide much of these new funds is indicated on page 123. This is a chart based on a study of supply and demand for long-term capital funds in the present year made by Salomon Bros. & Hutzler. It will be noted that of the total demand for borrowings, aggregating $24.7 billion this year, mortgage financing accounts for more than half. Less than $8 billion is estimated to be the demand for corporate financing, and we are informed that this study assumed that railroad equipment financing would represent only $400 million of this total.

The capital funds supply, as shown on the bottom of the chart, includes, at the righthand end of the bar, an indicated deficiency of $1 billion in long-term capital supply this year. This fact alone shows that the railroads can look for little if any increase over the $400 million they have been able to borrow for equipment in recent years. Furthermore, this data indicates that if railroads are to have access to an increased proportion of the total capital funds supplied, Government participation will be necessary to achieve that result.

The Federal agency proposed

A proposal to meet the basic financial problems in this area is embodied in H.R. 1365, which was introduced in the House on January 7, 1959. On page 125 of my exhibit you will find a brief summary of how this plan would operate.

A new Federal agency would be created, to be known as the Railroad Equipment Administration. This agency would have an initial capital of $500 million, with authority to borrow a further $2 billion. With these funds, needed equipment could be built and leased to the railroads. The rental payments would be fixed at a level sufficient, when added to the estimated scrap value of the equipment at

present prices, to cover completely agency interest costs, amortization payments, agency administrative charges, and a potential profit.

In the proposed legislation are detailed provisions as to the lease terms and the need for allocation of equipment where applications exceed the units which can be built.

There are two fundamental features of this plan which I would like to emphasize strongly. In the first place, it is a purely voluntary arrangement. This means that railroads able to finance their equipment needs would not be required to use the Government agency. We believe that perhaps one-third of the industry will be able to carry its share of the program without Federal cooperation. Another third of the industry will require financing aid under the plan for only a portion of its requirements.

Since the agency will tap new sources of capital not available now to the industry, there will be no direct competition for equipment borrowing as between the agency and those railroads who can finance all or part of their requirements through conventional means. This feature of the plan makes it peculiarly adaptable to the exact type of problem with which we are dealing and avoids any disruption to other phases of railroad financing.

Perhaps the most important point to emphasize is that this plan does not involve any subsidy. This is illustrated on pages 126 and 127. Here are a table and chart giving figures on the operation of the railroad equipment plan as contrasted with projected expenditures for waterway, ocean, and air transportation.

It can be seen that the railroad plan will not involve any ultimate cost to the taxpayers in comparison with the far more extensive amounts of outright subsidy provided for other modes of transportation.

In effect, we are only asking the Federal Government to provide access to capital sources not available to us at the present time. The full cost to the Government agency of providing these funds will be repaid under the rentals and other terms contemplated by this proposed legislation.

To emphasize that no element of subsidy whatever is involved, this proposed arrangement should be contrasted with other types of Federal financial assistance in which the interest charges is fixed by statute at a level equivalent to one-half or less of the current cost of funds to the Government, and terms run as high as 35 years.

By contrast, the railroad equipment plan contemplates loans running not longer than 20 years and financed on the basis of the full cost of the money to the Federal agency. In summary, there is no element whatever of subsidy, direct or hidden, involved in this Federal equipment financing plan.

Above and beyond these considerations, the Federal agency plan would serve a basic purpose in the national interest. If our potential enemies knew that the Federal Government was participating in a program to increase our freight car fleet by several hundred thousand cars, this would seem to me to have a very important influence.

Not only our own people but our enemies as well would know that the Government was determined to provide strong supply lines behind our enormous potential industrial output. Without an adequate supply line our great industrial potential would be meaningless.

Alternatives impractical

This proposed program is not only essential to meet the real problem which we are facing but, in fact, represents the only workable and effective solution. Various alternatives have been suggested, but in my judgment none of these is feasible or will deal with the root cause of the problem.

These suggestions include increasing rental charges for freight cars, raising interest rates on railroad equipment financing, and a system of Government guarantees on railroad borrowing for equipment.

The first of these so-called incentive and penalty car rental rates is now receiving active consideration by the Congress. I have testified during this session against all bills embodying these concepts before both the Senate and the House Interstate Commerce Committees. These proposals cover various devices to increase the daily per diem rates paid by a railroad for the use of freight cars not of its ownership.

The suggestions include the idea of imposing so-called penalty rates on certain types of cars during periods of shortages, and also the general upward adjustment of per diem rates to reflect revenue values in excess of basic ownership costs. You have been told in these hearings by the Chairman of the Interstate Commerce Commission that the latter approach would provide an "adequate national fleet

of freight cars * * * by providing incentives for increased car ownership through operation of economic laws and the profit motive."

There are many practical defects in this and other suggestions, and I have pointed these out in detail in my testimony before other committees. In fact, it is my opinion that these proposals will exaggerate the present difficulties and fail entirely to improve conditions.

I will not present all of these important factors in my present testimony. However, the facts which I am giving you today are sufficient to show that present inadequacies in the freight car fleet are not in any way due to the lack of penalties or incentives. The basic cause of the problem is not an arbitrary lack of cooperation by certain railroads or a selfish desire on their part to refrain from spending available funds on modernizing and increasing their equipment.

The cause is much simpler—the inability of certain segments of the railroad industry to obtain sufficient funds for these purposes. No amount of penalties or so-called incentives can eliminate the harsh realities of that situation and stimulate any railroad into spending money which it simply cannot obtain.

An increase in the interest rates would not increase funds which the industry could borrow. Increasing the rate of interest would not enlarge the railroads' share in the existing supply of investment funds. Our competitors for such funds, in both the utility and industrial fields, are quite capable of increasing the rate they pay. In fact, they are obviously better able to do so because of their earning status as compared with ours.

Federal assistance, under certain circumstances, has taken the form of Government guarantees on private loans to industry. The Transportation Act of 1958 authorizes such guarantees for railroads up to a total of $500 million. However, this form of Federal participation would not be suitable. A Government guarantee contemplates a direct increase in debt for the borrower, resulting in an increase in outstanding debt for those companies least able to increase their debt. A few facts will clarify this.

On pages 128, 129, 130, and 131, you will find information on the railroad debt situation. These show that total funded debt has remained at a substantially high level since 1940. More importantly, there has been a large increase in outstanding equipment debt, payments on which must be made annually out of available cash, without possibility of refunding as in the case of bonded debt. Also, you will note the continuing high proportion of total debt due within 20 years. This presents a further problem in meeting maturities out of depleted cash. In these respects, the eastern railroads are generally in a less favorable position than the industry as a whole.

The seriousness of this situation is emphasized on page 133. This shows the relationship of debt to total capitalization in the case of the railroads and other selected industries. At the end of 1957 nearly 36 percent of the total capitalization of railroads was represented by debt, whereas less than one-half of this ratio applied in the case of the other industries shown. All of these facts establish that it is entirely impractical for Government financial aid to take the form of guarantees on substantial additional debt for many railroads.

Another objection to the use of Government guarantees, in financing portions of the overall equipment requirements, is that such an arrangement would almost certainly discourage private lenders from participating in financing future requirements without the Government guarantee. Thus, the guarantee plan would seriously threaten the ability of railroads to resort to conventional methods of financing to the fullest possible extent, and it is greatly desirable to preserve that system.

Ultimately the result might well be that the Government would be drawn into carrying all railroad indebtedness. This would be the surest way of putting the railroad industry under Government control.

Private leasing arrangements in the case of railroad equipment are, of course, sometimes available to a limited extent in connection with private loans. My own company has succeeded in using such lease arrangements to handle a large portion of the current car program I have previously mentioned.

However, it should be realized that this method of private financing is clearly not available to all railroads, nor could it ever serve to produce the volume of funds which will be needed by the entire industry.

The financing of these cars was not easily accomplished and while it was possible for us to do it, in my judgment it cannot be done on a widespread basis. The Pennsylvania has a history which is free of default; it has large resources which, as a last resort, could be converted into cash; and it has an outstanding record of debt reduction since 1952 which was not interrupted even by the recession years of 1954 and 1958.

The combination of these favorable factors enabled us to do a successful job in spite of the low return we have realized on our property since World War II. Similar financing could not be arranged by roads with a less favorable background.

LONG-RANGE NEEDS

I do not want my testimony to leave the impression with you that the equipment financing plan will produce a long-range and overall solution to serious basic deficiencies in the condition of the railroad industry.

Although I urge this plan upon you as an immediate and necessary first step, this should not obscure the fact there are many other steps Congress should take to provide sound transportation, particularly in the light of emergency mobilization needs. Other witnesses, speaking for my industry, have outlined to you certain of these urgent steps. I wholeheartedly support these proposals, and others which may be necessary to create a well-conceived and sound national transportation policy.

One general phase of the railroad problem, with respect to which governmental action is long overdue, is the matter of the passenger service. It has produced serious consequences for many segments of the industry by reason of the serious deficits involved. Pages 134 and 135 contain the basic facts on this problem.

No extensive discussion is necessary. The facts speak for themselves. The problem has been studied thoroughly by competent and impartial authorities The most recent of these studies is the investigation conducted by the Interstate Commerce Commission, whose conclusions and recommendations were made public on May 18 of this year.

Among its general recommendations, emphasis was placed upon the need for tailoring railroad passenger services to the actual needs and demands of the public.

Congress last year provided a sound approach to this objective in giving the ICC essential powers in this area.

Unfortunately, there have been introduced in the present session bills which would wipe out this progressive step which Congress took. I refer to S. 1331 and to H.R. 5596, among other bills. These would only serve to worsen the very situation which the Congress and the Commission have so recently found to be a basic railroad problem.

The Congress has recently taken a very halting step in the direction of recognizing another of the Commission's recommendations. It has now provided that the passenger excise tax shall be reduced from the present 10 percent to 5 percent at the end of this fiscal year. This tax is well known to be a principal source of the decline in passenger transportation. In view of the obviously vital role of public transportation in a mobilization situation, it is to be regretted that the Federal Government seems so reluctant to eliminate this tax which discourages the use of public transportation.

CONCLUSION

To conclude, the weakest link in transportation is the segment on which the Nation must rely most heavily in time of war. Drastic corrective action must be taken. The immediate step is adoption of the Federal equipment plan. It will provide maximum equipment in the shortest possible time and without cost to Government. An early beginning must be made by Congress to correct the many other ways in which transportation policy is deficient. If these things are not done, the Nation faces an unpleasant day of reckoning.

Regardless of the nature of a future war, railroads remain the backbone of our transportation system. Nuclear bombing would seriously damage all forms of transportation. Experiences at Hiroshima and Nagasaki, however, proved that railroads can be more quickly restored than any other mode. This fact was repeatedly demonstrated in the European theater of operation during World War II under normal high explosive bombing.

Certainly, faced with a transportation system disrupted by nuclear bombing, the military and civil defense authorities must give first importance to the fact that one railroad track has a capacity equal to 20 lanes of highway, and can be restored to service much more promptly.

Another factor is that railroads constitute a network of transportation which can quickly be placed under unified control. Because of this, it is possible to arrange promptly for detouring rail traffic around damaged key points. Finally, the national interest no longer permits us to ignore the preeminent efficiency of the railroads in the utilization of manpower and fuel.

America faces a real crisis in transportation, particularly from the standpoint of possible mobilization. Study after study has been made and reams of testi-

mony have been taken. Speeches and editorials have poured forth pointing out this crisis, but Congress has done little that is helpful. The essential steps have not been taken. If they are not taken promptly, we will pass the point of no return.

(The exhibits submitted by Mr. Symes will be found in the exhibit section of this transcript.)

TESTIMONY OF MR. JAMES M. SYMES

Mr. SYMES. I would like to take a short time to highlight the main points in both of these documents.

First, I will summarize my principal conclusions. I have concluded that, during a sustained, full-scale mobilization, the railroads would be called upon to handle almost a trillion annual ton-miles of freight traffic. With their present ownership of motive power and freight cars, the railroads would fall short by more than 20 percent in moving that amount of freight traffic. To build the locomotive and freight car fleet up to a capacity for handling this volume, would involve capital expenditures of about $5¼ billion. My statement deals with the serious question of where this money is coming from. It includes what I regard as a very practical answer.

My presentation shows also how impossible it would be, from an equipment standpoint, to handle the passenger traffic that would be diverted to the railroads in case of war. This applies both to through passenger service and to suburban commuter service in metropolitan areas.

While there is a lot of deferred maintenance in our fixed plant, it could probably handle this volume of traffic for a short time without extensive repair. But, it should be understood, experience indicates indicates that the increased volume of war traffic is not uniformly spread throughout all rail lines. On the contrary, it is concentrated on only a portion of the total road mileage—mostly on what we call the main lines, between principal cities and large industrial areas.

I have also emphasized the difficulty that we would experience in obtaining a sufficient number of additional employees for a wartime volume of traffic. Also, we have less need today for unskilled and inexperienced men, because of increasing mechanization and automation.

The railroad mobilization situation today should be contrasted with what it was when World War II began. Then, we had a substantial surplus of everything—equipment, fixed facilities, and manpower. This was because we went directly into a war from a depression, which had not eliminated the railroad capacity built up in previous years when we were a monopoly in transportation. Today, we would go into a war from boom times in the economy generally which, however, have been times of great austerity in the railroad business. Consequently, the surplus capacities which prevailed prior to World War II simply do not exist now.

I have shown the reason for the inadequacy of present railroad facilities to meet wartime demands. This has been due principally to lack of earnings, and a resulting lack of credit, both of which have prevented us from acquiring sufficient new equipment or maintaining our old equipment properly. These financial disabilities have, in turn, been directly caused by Government policies that have fostered and encouraged other forms of transport at the expense of the railroads.

I have indicated why the railroads would again be called upon to handle the lion's share of wartime traffic because, among other things,

of the tremendous savings in manpower and fuel in moving goods and people by rail, as contrasted with other modes. Because of our ability to conserve these, and other essential wartime commodities, in our operations, major reliance on the railroad industry under mobilization conditions would be a "must" job from the standpoint of national survival.

In this same connection, I have contrasted the Russian transportation system today with ours. They have been substantially expanding their railroad facilities and traffic volume, while, as a direct result of Government policy, just the opposite has occurred in this country. In fact, more than 5 years ago, the Soviet Union achieved a railroad tonnage output greater than that of all U.S. railroads. Today, they are ahead of us by 33 percent. Apparently the Russians are planning for a different kind of war than we are.

I have shown that the rate of expenditure for railroad capital improvements is wholly inadequate, and that important maintenance work is being deferred by reason of the chronic condition of low earnings. I have indicated, in considerable detail, the causes for these inadequate earnings, as well as the reasons for the limited credit available to the industry for improvements.

It is my considered opinion that the railroad industry is in such an unhealthy condition that it will take bold and realistic action to cure the condition, and this will involve a long period of convalescence. With things as they are, the Nation just does not have adequate preparedness, from the vital standpoint of transportation.

As a remedy, I am again proposing to this committee—as I have to other Senate and House committees—that there be set up a Federal Equipment Agency. It would be charged with the responsibility of building railroad equipment and leasing it, on a full pay-back basis, including full interest and amortization costs, administrative expenses and a slight profit to the Government. Only if such a plan is adopted, in my opinion, could the railroad industry be strengthened to the point where it would be prepared to meet a national emergency promptly and effectively. No other plan yet suggested or devised could accomplish this essential result.

This is the central theme of my presentation today: If you don't proceed promptly to strengthen the railroad industry and its mobilization potential in the manner I have suggested, that essential step will eventually have to be taken in some other way. I can assure you that it will then be done at huge expense to the already overburdened Federal taxpayer. So as to leave no doubt as to what I mean by this—a delayed solution to this basic problem can only take the form of Government ownership of the entire railroad industry which will involve great expenditures of public funds.

All of these conclusions are based on conditions as they exist today. However, the facts brought out in my exhibit show the steady and accelerating decline in railraod plant, equipment, and manpower. Therefore, from the standpoint of mobilization planning, it must be borne in mind that present conditions will worsen with each passing day, unless immediate action is taken to halt and reverse this deteriorating trend.

In order to highlight the most important factual material, and to explain the conclusions I draw from this evidence, I suggest you follow

along as I go through my exhibit. This is the larger of the two documents before you.

The first few pages are an index. Then a map of the Pennsylvania Railroad system which indicates that we lie generally between the Mississippi River on the west, the Atlantic seaboard on the east, the Ohio and Potomac Rivers on the south, and the Great Lakes on the north, which is the highly populated and industrialized section of the country.

Then on page 1 is a comparison on a number of bases of the Pennsylvania with all class I railroads. As to the comparative volume of transportation handled you will see in line 8 that we carried over 14 percent of the total revenue passengers and nearly 13 percent of the total revenue tons of freight which is shown on line 10.

The other figures in this statement indicate similar comparisons in other important areas, but detailed comment is not necessary.

What I am trying to show here is that the Pennsylvania is more or less representative of the industry and we are generally recognized as representing about 10 percent of the entire industry.

Page 3 of my exhibit presents current figures showing employment in the transportation industry as compared with total employment.

The last column shows that total direct employment in transportation represents 11.6 percent of the employed labor force. Adding employment in allied industries there is a total of more than 10 million jobs shown at the bottom of column 3. This is 15.6 percent of the total employed labor force as shown at the bottom of the fifth column.

The transportation industry represents a vast investment of funds, in addition to this large investment of human effort in the way of employment.

If you will turn to page 4, it gives you the investment data and it is also shown graphically on page 5. Its extent is emphasized by comparison to the public debt.

Note on line E of the table, the total gross investment amounts to almost $285 billion, of which Government has provided over $69 billion all for modes other than rail.

Then turning to page 7, it shows the annual expenditure by the American people for transportation. In 1958 this amounted to $84.8 billion as shown on line E, the equivalent of 19.4 percent of the gross national produce for the year. So it is a very big part of our economy.

On page 8: In spite of the great extent of the investment in, and use of, transportation in our country, it has not prospered over the last three decades as other industries have. On page 8, it shows the change, since 1929, in total U.S. population, production, and transportation volume. With an indicated increase of 40.5 percent in population by 1957, total industrial, mining, and agricultural production rose by a weighted average of about 113 percent.

Freight volume by all modes, public and private, has more than kept pace, as in indicated by the increase of 122 percent, while passenger volume by public carriers went up only 79 percent.

On page 9 we have the total corporate sales in transportation and in all other industries since 1929 based upon Department of Commerce figures.

While the gross sales, as you will notice from the figures, of other industries rose by almost 400 percent, the increase in transportation revenues was only 176.3 percent.

Page 10 shows the trends in corporate profits, after taxes, for transportation and for all other industries. Here you will see while other industries have increased earnings after taxes by almost 190 percent, transportation suffered a decline of substantially 50 percent.

The reason for these low earnings in transportation, on increased volume, is shown on page 11. Note that the wholesale price index for all commodities had risen to a point 90 percent above 1929, while transportation revenue per passenger-mile was up an average of only 2.4 percent, and revenue per ton-mile up 61.5 percent.

The reason for the lag in transportation pricing is generally the fact that the largest component of the transportation figures is railroad rates and fares. These have been held down artificially because railroads during more recent years have had to compete for business with other forms of transport whose pricing does not reflect the full cost of their services. They are relieved of many costs by Government policies which I will discuss in more detail a little later.

In fact, the average revenue of railroads has increased less percentagewise than in the case of transportation generally. These facts are shown on page 12 for my own railroad—that is the Pennsylvania—and are charted on page 13. Our average revenue per ton-mile in 1957 stood 52.5 percent over 1929, as compared with more than 61 percent for all transportation.

Further evidence of the squeeze on railroad earnings is also shown on these pages. Our average wage rates in 1958 were practically 3.5 times their 1929 level and our material prices just about 2½ times as great.

You see on these pages, I think, some very basic reasons for the present highly unsatisfactory financial condition of the railroad industry.

This further appears on page 14, giving net investment, net railway operating income, and the computed rate of return for both class 1 railroads and the Pennsylvania Railroad.

While the net investment has increased, the rate of return on that investment has gone down for the industry generally and has been especially low in the case of the Pennsylvania.

Since World War II, the company I represent has had a return of as much as 3 percent in only 2 years. In 6 years it has been less than 2 percent and last year it was less than one-half of 1 percent.

As a matter of fact, the Pennsylvania had rates of return during the depression years of the thirties at a generally better level than we have had since World War II.

Now the relative position of the various segments of the transportation industry with respect to earnings is shown on page 15. Here there is summarized the rate earned on net assets, total capital stock plus surplus, of different corporate groupings. Note especially the last two lines on the table showing the rates for 1958 and for the average of the last 5 years. Nonregulated industries, such as manufacturing, have earned a return averaging as high as 12.8 percent. Regulated public utilities other than transportation have been averaging about 10 percent. These regulated public utilities are really true monopolies and, as such, do not face direct competition as we do.

Important segments of the transportation industry, principally the railroads, are regulated as monopolies although competition is as vigorous here as in the nonregulated industries.

The average rate earned over the last 5 years by the different modes are, as shown on the statement, miscellaneous transportation including trucking, 11.6 percent, air, 10.1, and shipping, 9.4.

Class 1 railroads by contrast have averaged only 4.7 percent, which is below all other industrial groupings shown.

Now this, of course, is an industry average. The last column of the table gives the comparable figures for the Pennsylvania Railroad. In the last 10 years we have earned a return on this net asset basis of as much as 3 percent only once, while last year our rate fell to only one-tenth of that.

Page 17 shows both for class 1 railroads and the Pennsylvania, statistics on road and track mileage, train miles operated over these facilities, and the rate of utilization. You can see from this statement that each item on the table is indexed to show the relationship of the annual totals to the figure for 1944. In other words, 1944 is 100.

Miles of road and of track have declined. In columns (14) through (17), showing train miles, you will observe substantial decreases from the 1944 peak.

The last four columns show road utilization in terms of train miles per mile of main track. During recent normal years, the class 1 utilization has been at about two-thirds of the rate in 1944, while the Pennsylvania's has been in the neighborhood of 60 percent or lower.

Page 18 shows the declining portions of road mileage used in passenger service, and it is summarized in the last two columns. Contrast it with the use of substantially all mileage for freight.

All of these decreases in passenger utilization of railroad mileage have been steady and continuing, and this crucial process is even now going on at an accelerated rate.

You will note at the bottom, on class I, the railroad plant has passenger service on only 48 percent of it, and in the case of the Pennsylvania, only 43 percent, and it is declining.

This declining passenger service is further demonstrated on page 19. This gives annual train-miles in freight service and in passenger service.

Note, also, the very substantial decline in freight service train-miles to a level in recent normal years that approximates two-thirds or less of the wartime volume of 1944.

Pages 20 and 21 show, again for the class I railroads and the Pennsylvania, respectively, traffic units combining revenue ton-miles and passenger-miles on an accepted basis. And by that I mean that one passenger-mile equals two ton-miles.

The last two columns give the average of these traffic units per mile of main track operated. On this basis, main track utilization has averaged about 75 percent of the 1944 peak during recent normal years for the country as a whole.

Exemplifying the situation in eastern territory, the Pennsylvania's recent normal utilization has declined to less than two-thirds and was below 52 percent of the 1944 rate only last year.

While these average figures indicate a substantial unused road capacity, it must be emphasized that increases in traffic loads that I have mentioned during wartime do not occur uniformly on all railroad lines.

The next six pages of my exhibit are used to show what actually happened on the Pennsylvania during World War II, by contrasting 1940 and 1944 traffic loads.

Page 22 lists our East-West main lines. That is generally from New York through Pittsburgh and Chicago, on to St. Louis and so on, and shows in the last two columns the increases in gross ton-miles. And you will notice that they have been substantial on this East-West main line portion of the railroad.

Now, the map on page 23 furnishes a key to these lines on the basis of the numbers in the second column of page 22.

Note in column 18, the substantial increase in gross tonnage occurring on each of these lines.

Then, pages 24 and 25 are the same thing for what we call our North-South main lines. Chicago to Louisville, Chicago to Cincinnati, Cleveland to Cincinnati, New York to Washington, and so on. And here, again, we show substantial increases on the main line traffic during the war as compared with prewar.

Then, as you go to 26 and 27, that indicates our branch lines, on which we have an awful lot of mileage. By contrast, the branch lines had decreases in the majority of cases with comparatively moderate increases in the remainder.

What I'm trying to show through those exhibits is that this war traffic really bulges on your main lines. If it were spread uniformly over this whole railroad plant, it might not be too much of a job except from an equipment standpoint.

I would now like to cover motive power.

On pages 28 and 29, you will find tables giving basic statistics for the class I roads, and for the Pennsylvania. These show locomotive ownership by types of units, together with average tractive effort, yearly retirements, and installations, average number of units not in service, total locomotive miles and active freight locomotive average daily mileage.

Columns 2 and 4 indicate the extent to which older forms of motive power have been replaced by modern diesel units.

The columns showing units not in service are particularly significant. They indicate a substantial number of locomotive units available, but not in service during the 1930's, and even during the years of World War II.

Contrast this with the recent substantial decline in unused capacity. The last column shows the steady increases in daily use of active freight locomotives reflecting largely the greater efficiency and greater availability of the new types of motive power.

All these statistics emphasize the railroad industry's program of tailoring their equipment ownership to current normal business requirements. This is necessitated by business and financial factors which I will talk about just a little later.

Now, on page 31, you will find a chart which shows graphically the overall decline in the number of motive power units and the complete changeover, you might say, from steam to diesels.

The steam is practically out of the picture entirely, and mostly all dismantled.

Pages 32 and 33 give additional important information on motive power capabilities. The first of these pages in columns (2) through (5), gives the total tractive effort of all locomotives, and that is at the year end.

The next four columns indicate the aggregate trailing gross ton-miles. That is the load pulled by these locomotives.

The last four columns show average trailing gross ton-miles handled annually be each pound of tractive effort indexed on the basis of 1944, which is a measure we use for efficiency.

The chart on page 33 shows this latter information graphically. This index of locomotive output shows that the modern types of power are capable of somewhat greater performance than those used during World War II.

Thus, the average output for 1956 did exceed the 1944 peak. And I guess in 1959, it will show a rather substantial increase again when we get the final figures.

The next five pages in the exhibit, through 39, show important statistics on freight cars. Note in the first group of columns on page 34 that the current freight car ownership is almost identical with that immediately prior to World War II and the aggregate capacity is somewhat higher.

However, as illustrated in the last four columns, the heavy surplus existing prior to World War II no longer obtains, and there have been shortages in every year since 1942, greater in recent years than during the war.

Page 35 has the same information for the Pennsylvania Railroad.

Page 37, I don't believe needs any comment. It is just to give you information as to the ownership of freight cars by class and capacity for the class I railroads of the United States.

There is additional data on this situation on pages 38 and 39, where you will note, on page 39, that the utilization of the freight car fleet under current normal business conditions is at a higher level than existed prior to World War II.

This again shows the lack of additional capacity to handle substantial increases in traffic over present normal levels.

Pages 40 and 41 are the same information on passenger cars as I just previously referred to in freight cars. It shows the ownership and the capacity of our passenger fleet, both class I and Pennsylvania Railroad.

Then, as you turn to page 42, the general passenger car situation is covered, as I say, in the charts appearing on pages 40 through 47, really. But especially noteworthy, on page 42 is the severe decline in total ownership from World War II levels, particularly in the case of the Pullman Co., which represents sleeping cars.

A lesser but significant decline has also occurred in class I railroad ownership of passenger-carrying cars and the aggregate decrease in seating capacity brings both of these situations together.

The passenger service operating statistics on page 44 and page 45 show that the railroads are handling far fewer passengers per train than during the war.

These figures cover all types of passenger service, including branch line and commutation. This indicates some available capacity for expanding passenger traffic, but as you will see clearly from the other figures, this would not accommodate the volume handled during World War II.

Then as we turn to pages 46 and 47, 46 is a density chart of passenger-carrying trains on the Pennsylvania Railroad in 1929 over the entire system, including branches.

The opposite page is what it is today in 1959.

You will notice the complete abandonment of a great amount of branch-line mileage and the sharp decline in train density all over the railroad. As a matter of fact, it is much less than half today of what it was in 1929, only about 40 percent, and the same is true of the war load in 1944.

The next two, 48 and 49, portray the same type traffic density chart on suburban operations.

You will notice in 1959 as compared with 1929—the passenger commuter service has disappeared entirely at some places, such as Buffalo and Cincinnati. It has been greatly reduced in Pittsburgh, Baltimore, and southern New Jersey. But in the Philadelphia and New York areas, it is going right along and, as a matter of fact, is increasing somewhat.

At page 51, you can see the very definite increase in commutation patronage incident to World War II. And this demonstrates, I think, the extent of public reliance on this service at times when the purchase and use of private automobiles are restricted.

You can notice how it bulged there during the war years from 1941 on up through 1947.

Next, on pages 52 and 53, we show you how it works out by lines, on the Pennsylvania Railroad in Philadelphia, which is our very heavy commuter service, where we operate six or seven different services.

During the war years, as you will notice, there was a peak, which indicates how it will crowd up during a war load.

On pages 54 and 55 is indicated the real problem in commuter service and how it has changed.

In 1940, you will notice the peaks, Monday to Friday, they were high. We still had some business on Saturday and some on Sunday. Whereas in 1958 those peaks are pushing to the top, meaning our equipment is only working 4 hours a day through the week. On Saturdays it is gradually going down to the place where there is nobody working on Saturday and Sunday any more, and it is disappearing.

There is plenty of capacity in our suburban service, because as I say it only works 4 hours a day, but the people don't work that way.

However, if we had a war load, undoubtedly people would be working 6 days a week and there would be a lot of nightwork, where we could utilize a lot of this equipment to handle that kind of travel.

Now, the last phase of railroad capabilities covered in the exhibit is the subject of manpower dealt with on pages 56 through 59.

Total railroad employment has recently hit an alltime low. This situation would require the railroads to enlarge their forces substantially to meet increases in traffic.

On page 57, there is a table placing railroad employment in the overall picture of national employment and manpower.

The high employment of 1,420,000 men by the railroads in 1945 has steadily declined to a present level of 840,000, or less than 60 percent of the wartime total.

Meanwhile, total civilian employment has been increased 22 percent, from less than 55 million in 1943, to more than 66 million today.

This contrast is highlighted in the bottom portion of page 57, where in the last column you will see that the railroad employment has fallen from 2.2 percent of the total labor force, to where it is now 1.2 percent at the present time.

Now, as an indication of the seriousness of this problem, if we turn to page 58, that contains data on labor turnover in the case of the Pennsylvania Railroad.

Our working force last year fell to the lowest level since records have been kept, and that goes back to about 1904, and I don't know how much beyond that. It averaged less than 81,000.

Now, the kind of problems we would face in the event of national mobilization can be appreciated by noting the trends during World War II. From 1939 to 1944 we had to increase our average number of employees from less than 100,000 to over 164,000.

This meant, for example, we had to hire more than 130,000 people in 1942, which was the equivalent of 86 percent of our average force in that year. So you can see what a terrific turnover we had, and bringing women into the picture and so on.

In addition, the skills required in the railroad industry have been upgraded in the last two decades as exemplified by the statement on page 59. That shows that we have to have more and more experienced people by reason of mechanization, operation of diesel locomotives and maintaining them, and so on, than we did before. So there would also be the problem of training the additional forces.

On pages 60 and 61 are statistics on the gross capital expenditures made by the railroads to improve their roads and equipment facilities over the years. These show that whereas the properties were kept in good shape throughout the 1920's and even the depression 1930's, the level of capital spending since World War II has not been adequate from any standpoint.

The maximum effort which the industry was able to make in this respect has not served to keep their properties in desirable condition to handle even presently reduced traffic loads, let alone to provide for a significant expansion in operations to meet emergency conditions.

Page 63 contains statistics on materials used in track maintenance on the Pennsylvania. The most drastic decline in maintenance materials occurred in the case of new rail.

The average tonnage during the 5 years ending with 1959 will be less than 15,000, as compared with over 228,000 in the late 1920's.

This is an austerity condition which cannot help but have its effect over the long term. If the traffic load is noticeably increased over the present levels, it will be necessary to get started and started rather quickly on this deferred maintenance.

Pages 64 and 65 give additional information on crosstie and rail programs and relate these items to gross ton-miles and to mileage of track maintained.

On the basis of traffic, you will see that the number of crossties installed per million gross ton-miles appears in column 6 of both tables. The class I railroads in the years 1929 through 1933 installed about 40 crossties per million gross ton-miles, but since 1945 this figure has never exceeded 20, and in 1958 was less than 10.

Now, it is true that due to the treatment of ties, creosoting and so on, we are getting a life today that we never hoped to attain. I would guess it would be about 33 years' life of a tie now, where back in the old days we used to figure 9 years and then about 18, and now it is about 33. Even so, we are way behind in tie renewals.

Now, page 67 gives for the Pennsylvania information on the deferred maintenance—that is, the deferred equipment maintenance.

On June 1 of this year, over 21 percent of our freight train cars required heavy maintenance.

Now, this condition will be substantially improved in connection with our current large program of constructing freight cars. But still a great deal will remain to be done.

Now, this is a general condition which has existed on many railroads from time to time since World War II, but it emphasizes again the basis of our present deficiency, which is, namely, lack of funds.

And you will notice at the bottom of the page, in passenger and freight train cars and locomotives, that we show there is around $86 million in maintenance that should be brought up and will have to be brought up if we get into an emergency.

Pages 68 and 69 give detailed information on the abandonment of road and track mileage, as well as the retirement of other units of fixed property.

The trends illustrated here are in line with the general picture of reducing our overall railroad capacity, in an otherwise growing and prosperous economy. We are decreasing road mileage and track quite rapidly.

On the right, page 69, is indicated the extent to which the Pennsylvania has been doing this—where you will notice in column (2) to the end of 1958, and that is since 1945, that we have abandoned track and other facilities to the extent of $65.8 million ledger value and we have $26 million additional programed, or a total of $92 million.

Based on these facts as to railroad capacities, I think I can summarize the entire picture in about this way:

First, road facilities could accommodate anticipated wartime requirements, provided deferred maintenance is eliminated.

Second, present motive power, with the additions now programed, operating under wartime conditions, should be able to handle traffic to the limits permitted by the present car fleet.

Third, the present freight car fleet, if cars are more promptly loaded and released, as they were in World War II, should be capable of handling over 40 million annual carloadings.

Maximum weekly carloadings might exceed 880,000 under these ideal conditions.

Overall, it is estimated that the railroads could handle approximately 750 billion annual revenue ton-miles, if their present fleet of freight cars were in good order and were utilized, as I say, as they were in World War II in connection with heavier loading and more prompt loading and unloading.

Four, the passenger equipment, including suburban, cannot now handle special peak passenger movements satisfactorily.

As a matter of fact, when we get into the holidays like Fourth of July, we have standees all over the railroad. Just not enough equipment.

Some additional capacity would exist under wartime conditions but nowhere near what is anticipated.

Five, from the standpoint of manpower, there is some flexibility to handle traffic increases in moderate amounts over present levels.

The facts are clear that the ruling limitation on railroad capacities lies primarily in the equipment area. This includes motive power, freight car and passenger equipment. It is here that first steps must

taken if the capabilities of the railroad industry are to be significantly expanded.

We can now consider the potential demand on the railroad under future mobilization conditions, and this of course requires assumptions.

In some quarters, it is said that any general war would involve an all-out nuclear attack and would be over in a matter of days or weeks.

This assumes that any military action of the traditional type would be limited to more or less local or brush-fire wars, similar to the Korean action.

If this is an accurate prediction, there would appear to be little need for extensive study of transportation preparedness. However, if these opinions are not correct, or if there is any substantial question about their accuracy, we will certainly not be safe in ignoring the possibility that the Nation would face a general war of the traditional and extended type.

And certainly I am in no position to express any opinion as to which of these assumptions may be correct, if either of them are. But I do believe that none of us would want to gamble on our defense and perhaps future existence by relying entirely on the opinion that the next general war would be over quickly.

I am afraid if we plan for it that way, it might very well be that way, but with very unfortunate results.

And under these circumstances, we must consider the facts of history and attempt to apply them as realistically as we can.

And to make the assessment on this basis, we should begin by reviewing the overall traffic volume under past conditions of peace and war, together with the relative distribution of that volume as among the different modes of transport.

Now this data for freight traffic appears beginning on page 70 of my exhibit, and continuing through page 73.

You will note the picture graphically, better than the figures, if you will just look at page 71.

You will note the tremendous upsurge of all freight traffic from 1940 to the peak war year of 1944, and particularly note that the railroads had to absorb most of the increase.

In 1943, as has been stated, the railroads handled 71.3 percent of all the intercity freight traffic.

Since the war, however, railroad freight traffic has followed a gradual downward trend, while the movement by all other modes has expanded.

Now these facts present the most crucial issue in the present hearing, I think. Quite obviously, a general war extended over a substantial period would require a vast increase in railroad freight ton-miles.

I have already expressed the opinion that this would aggregate nearly a trillion, as contrasted with the wartime maximum of about 750 billion, and the recent normal levels of between 600 and 650 billion.

This would mean the railroads would be called upon to handle, roughly, 50 percent more freight volume than they have today.

Now, pages 72 and 73, I don't think need comment.

It is just a statistical showing as to how freight traffic is divided up among the various modes and was indicated on the previous graph.

There are additional details shown on pages 74 and 75 which show the annual freight car loadings and originated freight tonnage by various commodity groups.

These figures give a helpful indication of the potential increase in demand for rail freight service in connection with certain commodities.

For example, if you would take grain, in column (2), exhibit 74, you will notice it is continually going up. Well, that is only natural because of an increased population.

Livestock is going down, because there is more butchering of it being done near the grazing sections, and it is moving as dressed beef.

Getting into coal and coke and ore, you could certainly expect those commodities to take a very sharp upturn as they did during the last war.

Now the one on the left is by carloads, and the one on the right is by tons, so generally they reflect the same thing.

The next four pages, 76, 77, 78, and 79, contain data on weekly carloadings which must be taken into account in determining maximum potentials.

On the basis of all of these factors, it is possible to estimate the potential wartime demand upon the railroads under sustained full mobilization conditions. For this purpose, we will take the overall traffic situation in the typical war year of 1943 as a basis.

At that time, the per capita volume of intercity ton-miles was 7,681. And this reflected only the population residing in the continental United States.

Taking the increase in residential population from 1943 to the present time, which approximates 31 percent, and applying it to the total intercity ton-miles in 1943, we arrive at a total freight transport demand of approximately 1.36 trillion ton-miles on an annual basis.

If the railroads were expected to handle the same portion of this total as they did in 1943, or about 71 percent, the total wartime demand on the railroads would be about 965 billion ton-miles a year.

This would involve freight car loadings of over 50 million, on an annual basis, with a maximum weekly loading demand of approximately 1,100,000 cars.

That takes into account peaks, as we know them.

Now the next two charts, 78 and 79, indicate graphically how we can expect these peaks during the war, during the peace, and during the Korean situation. We still have them. That merely reflects it graphically.

Now, turning to the subject, again, of passenger traffic, we find substantially the same distribution statistics on page 80 through page 85.

Looking particularly at the chart on page 81, you can see several very important factors.

First, during World War II there was a substantial decline in passenger mileage by private automobile, due to wartime restrictions, of course, on fuel and other items.

At the same time, commercial transportation increased substantially to take up the slack.

And looking back again at page 80, on the other side you will see in column 9, a total for-hire-transport increase from 35 billion to almost 129 billion passenger-miles.

Now, of this tremendous increase the railroads had to absorb over 74 billion, representing 79 percent of the total increase.

The second significant fact is that since World War II, total commercial passenger transportation has declined, but there have been very significant increases for the airlines.

The rail-passenger volume is currently at less than 25 percent of the wartime volume.

If World War II conditions were to be repeated, the demand for increased railroad passenger service would be fantastic. There would be many times the volume which railroads could possibly handle with present equipment.

I frankly do not know how this country would move people if we entered a full mobilization period.

It is certainly safe to say that if the Government expected the railroads to move people at anywhere near the volume of World War II, the way we are going now, there is only one way it could be done, and people would have to ride in boxcars converted for passenger service—which they did to some extent during the last war.

Pages 82 and 83, again, are statistics on intercity passenger traffic.

The same for 85.

It needs no comment.

I think pages 86 and 87 are very important, and I will comment briefly on that.

The root cause of the present railroad deficiencies is the fact that government at all levels over a period of many years has engaged in a vast and costly program of supporting and encouraging all types of transportation, other than the one upon which major reliance must be placed in time of war.

Page 86 and 87 show this subsidy program for other forms of transport.

Page 86 gives the total Government expenditures from the earliest years for which information is available. You will see these public expenditures aggregating the fantastic sum of about $119 billion.

Showing that this program is accelerating is the data on page 87. For the 12-year period, 1946 through 1957, Government expenditures on transportation facilities totaled nearly $72 billion and in the single year of 1957 they aggregated almost $10.5 billion as shown in the last column.

This table also helps to show that these expenditures are far from reimbursed by the beneficiaries, even if you take into account every form of tax or fee which the proponents of these programs argue should be regarded as user charges.

Now, the inevitable result of this large promotional program for selected segments of the transportation industry is graphically shown on a series of maps which begins on page 88 and continues through 101, contrasting, in each instance, 1930 with 1959. The first, 88, on the left, shows the paved intercity highway routes in the United States in 1930 and exhibit 89 shows what they are this year, 1959, showing how they have greatly expanded.

Pages 90 and 91 show the same thing for the multiple-lane system of toll highways in the United States today, and what they will be under the new limited access highways toll-free system.

They show how they will cover the whole country.

On pages 92 and 93 are shown the scheduled airlines of 1930 and what they are today.

Pages 94 and 95, the inland waterways, 1930, and today, showing how they have expanded into the densely traffic-producing areas.

Pages 96 and 97 show the same information for the natural gas pipelines.

Pages 98 and 99 for the oil trunk pipelines and 100 and 101 the railroads. While we still have what looks like a spider's web, it will be noticed by the figures at the bottom that they reflect a decline of about 30,000 miles of line and 40,000 miles of track in this period while this other growth has been taking place.

To show that this situation is solely the result of Government subsidy and promotional policies and is not based either on military planning or natural economic forces, I direct your attention to the next three pages in this exhibit.

The first two, 102 and 103, give a startling picture of the contrast between transportation conditions in Russia and the United States.

As I mentioned before, the Russians have outperformed the American railroads with respect to revenue tonnage carried for at least 5 years and now they are running about 33 percent ahead of us.

But even more significant is the distribution of traffic between the different modes as shown on page 103. The rail portion of intercity traffic in Russia today, more than 82 percent, is just about as high as it was in 1940 and 1945, while in the United States this has declined from over 67 percent to about 45 percent in 1958.

Russian dependence on inland waterways and motortrucks is no greater now than in 1940. Apparently they have concluded that from the substantial decline in these barge and truck ratios from 1940 to 1945 that major reliance cannot be placed on those modes of transportation for national defense.

Now, it cannot be denied of course that the Russian figures represent the result of careful planning, I think.

That is the way they do everything. They have planned control. These figures really should cause some concern.

Now two previous witnesses I heard comment on the savings in fuel and manpower by moving by rail, as compared with other methods.

Now, you see that to move the same freight tonnage across the country—and that is shown on 104—would require three times as much fuel by highway as by rail, 4¾ times as much by water, 23 to 27 times as much by air depending on the type of power used and manpower the same, but I think it will illustrate very clearly in the graph at the bottom of the sheet, here.

The saving in the two strategic materials which I would assume would be fuel and manpower, is shown here.

Now, going to the basic problem of correcting railroad mobilization deficiencies, my prepared statement and exhibit next take up the question of how and by whom the necessary steps should be taken.

The threshold problem results from the fact that the railroad industry is not in a financial position to undertake full responsibility to correct this situation.

Now, page 105 of the exhibit gives a pretty clear picture of the unsatisfactory financial results of the railroad industry generally and particularly the railroads in the eastern territory.

Earnings have been far below the amounts required to maintain the properties in satisfactory condition and to provide a basis for modernization and expansion.

Now the results of this unsatisfactory earnings record are emphasized on the next 3 pages, 106, 107 and 108, which show a steady deterioration in the working capital position of the railroads.

Page 109 particularly demonstrates the extent of this problem by showing that working capital has been insufficient in most recent years to cover payrolls for even 1 month.

In the case of my own company and many other railroads in eastern territory there has actually been a working capital deficit in recent years. You might ask how that could be. Well, it means that we are working on the cash we should have set aside for debt due this year, or in the inventory, and that is how close we are working, which shows a minus figure.

But, the railroad industry as a whole has only about a month's working capital against the payroll. I mean enough working capital to meet a monthly payroll.

Pages 110 and 111 emphasize this situation even further. These show for the Pennsylvania, the substantial amounts of cash generated over the years since World War II through the program of abandoning road facilities, reducing the equipment fleet, and liquidating other assets.

The working capital situation on the Pennsylvania would be far worse than the situation is today if we had not succeeded in realizing cash in excess of $266 million by these means.

These facts show that only through Government participation in meeting the problem will it be possible to correct the present serious deficiencies in railroad equipment.

The next statements in the exhibit take up the matter of freight and passenger car ages. This is an important factor in outlining the job which must be done.

I will not take any time going over it, it is all there, but it shows the age of freight cars averaging nearly 19 years, and on pages 114 and 115 are passenger cars that average 28½ years old.

That includes the Pullman Co. passenger cars.

Pages 116 and 117 show the same information for the Pennsylvania and I am sorry to say we are older than the rest of them, in both freight and passenger cars.

Pages 118 and 119 show the suburban car age, which is 27½ years which is pretty old for suburban equipment.

Now, all of these figures I think show that in addition to the numerical capacity deficiencies in railroad equipment, there is an additional serious deficiency from the standpoint of car age. I emphasize that sound mobilization planning cannot take into account merely the number and capacity of the present cars.

If wartime conditions occur, the older equipment will necessitate the expenditure of considerable money, manpower and critical materials to keep it operating at peak efficiency.

It would be far safer to correct these deficiencies today than to withhold this necessary action until emergency conditions are with us.

Furthermore, this age condition of railroad cars is today far more serious than it was at the beginning of World War II.

Thus we cannot rely on the same relative performance as the railroads then achieved.

I believe that my testimony and exhibit have shown that railroad equipment in service today will not measure up to requirements if wartime demands we have known in the past occur in the future.

I have stated we will fall short by more than 20 percent in meeting the requirements for freight traffic alone.

To provide the amount of equipment needed to move the wartime freight traffic, which I have stated would cost over $5 billion.

The poor earnings of the railroad industry and its resulting low credit standing have placed it in the position where it just cannot do that job alone.

On top of this, to increase our passenger service capabilities, there ought to be capital expenditures of at least additionally $2 billion for equipment.

Now that is on the assumption that we would handle just the same amount of passenger travel that we had during the last war. And to replace the cars that have already been scrapped, it would cost well over $2 billion to do that alone.

While there is already a considerable amount of deferred maintenance in our fixed plant, there is probably sufficient road capacity to handle the volume of traffic I am talking about. But again I would emphasize that under wartime conditions for any length of time we would have to pour a lot of money then into maintaining it in proper condition for that sort of a load.

Now, if the railroads do not have the equipment to handle a wartime increase in traffic volume and do not have the earnings or credit to acquire it now, what is the solution?

I would think those who are responsible for our national mobilization planning would not want to say that there is not any answer to that question. This is particularly true when we realize that there is a proposal now before Congress that would go a long, long way, I think, in solving this problem and without ultimate cost in any way to the Government. Even more important, however, is the fact that this proposal cannot wait for implementation until an actual emergency exists.

It must be put in effect a considerable time before such conditions arise, however, because the job cannot be done quickly. In order to show exactly what needs to be done by the Federal Government we must consider what the basic financing problems are from the standpoint of the railroad industry.

They have a seriously depleted working capital and a depressed level of earnings, both of which limit severely the capital funds which the industry can generate internally.

For the same reasons, the railroads do not have access to private capital sources from which to borrow the amounts required for this purpose.

Now page 121 of the exhibit, I think, highlights the situation with regard to internal funds. Comparing railroads with other transportation modes, public utilities and leading nonregulated corporations, note that our book net assets have been practically steady in recent years and net income after taxes has steadily declined while the other groups have generally enjoyed unprecedented prosperity.

Referring to page 122, we project the railroad industry's cash flow over the next 10 years to show graphically the cash requirements as contrasted with the sources.

You will observe that the deficiency in cash sources during that period totals $9 billion, if necessary capital expenditures are considered. The condition of the market for long-term capital funds at the present time is charted on page 123.

No more than $400 million of railroad equipment borrowings are included in the estimated demand for such funds. But even so, the chart shows an overall deficiency of $1 billion in the capital supply. You will notice at the top the mortgage financing, State, municipal, and public revenue authority financing and the corporate financing. In that corporate financing, as I have stated there is included $400 million of equipment for the railroads, which is about the peak that we can expect.

So, certainly with that situation and our poor earnings position, the door is not very wide open for us to get funds.

Now, considering the situation, in both the railroad industry and private capital markets the answer is clear. Government must promptly take steps to provide access to the capital funds not otherwise available to many railroads needed to finance their share of this essential equipment program.

H.R. 1365, introduced in the House January 7 of this year, in fact embodies those steps, and is outlined on page 125, very briefly.

A self-liquidating Government agency would be established with an initial capital of $500 million, and authority to borrow an additional $2 billion, for purchasing new equipment.

Railroads would be authorized to apply to this agency for long-term net leases of the equipment. The rental payments would be fixed at a level sufficient, when added to the estimated scrap value of the equipment, to repay the agency's full investment, together with all interest costs, administrative expenses and a potential profit.

The leases would obligate the participating railroads to assume all costs of maintaining and operating the cars.

No railroad which has access to adequate funds to undertake its own share of the program would be required to deal with this agency. Even more important is the fact that this proposal does not involve any subsidy to the railroad industry directly or hidden.

Now, if you will turn to the next pages, I will show you why that is so. Pages 126 and 127 of the exhibit demonstrate this, I think, in rather dramatic fashion. All of the agency's costs would be ultimately repaid under the program in accordance with the detailed provisions contained in the bill that is now before the House.

If you will just look at 127, the top block there is the plan I am proposing. Two and one-half billion dollars. You will notice the public funds would be about $500 million and about $2 billion would be borrowed by the agency, and reimbursement is made in full in 20 years. Then the other bars, covering waterways, ocean shipping, and air, indicate generally what is going on now, and programed for these different modes, assuming that what is being done this year will be extended. No reimbursement is provided except in the block for airlines, which is $600 million in 20 years from the fuel tax.

I don't think any comment is necessary on pages 128 and 129, other than what I have in my statement. It indicates how the equipment obligations are moving in and how we still have a lot ahead of us in the way of debt due in the next 20 years; and, of course, the equipment obligations cannot be refinanced, they have to be paid as they mature, whereas with the bonded indebtedness you can sometimes refinance it. That is for all railroads, and the next one is for the Pennsylvania alone.

The next shows the percentage of debt to total capitalization for the very important industries of chemicals, steel, and oil, and again it gives you a good idea of why we don't have the credit. We are already borrowed up to the hilt, and these other fellows—well, we can't meet them on any money market.

Pages 134 and 135 again contain a lot of statistics.

Gentlemen, I think that completes my statement.

Mr. KILDAY. Thank you, Mr. Symes. We appreciate your statement and the tremendous amount of study and effort which has gone into the preparation of your exhibits. These will require a good deal of study on our part, which we will do after we have concluded the hearings.

Mr. Van Zandt.

Mr. VAN ZANDT. I, too, want to commend you, Mr. Symes, for this comprehensive and far-reaching statement.

Mr. SYMES. I have appeared in a good many hearings before the House and the Senate, and I don't know of anything more important than what you fellows have your finger on, right now.

Mr. VAN ZANDT. I was just about to say that. In all my congressional experience I have never seen such a broad and far reaching statement.

In connection with your working capital, you show working capital deficit for the Pennsylvania Railroad in the last 3 calendar years. How do you operate on that?

Mr. SYMES. That is by using money for debt due within a year, where you should have the money set aside. It is rather sacred and is recognized by business generally that you should have a debt set-aside during the year to take care of it. As I say, we don't have that. We are using money which should be set aside.

Mr. VAN ZANDT. In addition to the statistical information you have here on fuel and manpower deficiency of transport modes, you have shown that some are growing rapidly and rails are shrinking. Are there other economic and service factors which explain this?

Mr. SYMES. No, I don't think so. It is due to the Government policy of subsidizing these other forms of transport, which people don't recognize so much in the day-to-day run of business, but if you ever get into an emergency and see how fuel and manpower is being wasted by reason of those policies, I think something would have to be done, and it highlights itself when we get into an emergency, as we indicate in our report.

Mr. VAN ZANDT. In other words, the public is taking it as a daily thing?

Mr. SYMES. That is right. However, if there is a shortage, this is what would have to be done, in my opinion.

Mr. VAN ZANDT. I notice there you have laid considerable stress on the Russian reliance on rail transportation as opposed to our greater diversification. Does the present Russian situation reflect lack of progress in developing other forms of transportation, rather than a planned reliance on rails?

Mr. SYMES. I don't believe so. They know how to build roads and automobiles and are right up in their air service. I think it could very well be a planned control of what they are thinking about. I don't know, of course, but the figures would rather indicate that.

Mr. VAN ZANDT. Several years ago, along with other members of the joint committee, I was in Russia, and we spent a portion of the day in a factory where they were manufacturing railroad equipment. I was impressed by their motive power and their passenger and freight equipment. It was well built. Of course, it was along European designs. Then we had a chance to see some of their new roadbed and it impressed me considerably.

Mr. SYMES. I get the same thing from people who have been over there, who know railroads. They are not only double tracking but they are electrifying and putting in heavy rail, and they are going very strong.

Mr. VAN ZANDT. One of the officials mentioned to me about the program for electrification of a great percentage in Siberia.

Mr. SYMES. That is right.

Mr. VAN ZANDT. I understand that program is going along very rapidly.

Mr. SYMES. That is what I have been told.

Mr. VAN ZANDT. You present an interesting series of maps showing a marvelous increase in all forms of transportation, other than in railroads, and only a small decline there. Doesn't this actually show an excellent transportation mobilization base overall?

Mr. SYMES. I wouldn't think so. It does in times of peace, perhaps, but when you figure out that these other modes, as they have in other wars, cannot carry their share of the increase—in fact, can't carry what they are now carrying, probably, from a manpower standpoint and everything else, and they have to throw it to the railroads, I think it is time to take a look.

Now, you mentioned this morning—or somebody did—about the division of Government traffic. I would certainly think that it would be fair that if we are expected to be called upon to handle 75 percent of the load, or 70 percent, or whatever it is, during wartime, they certainly ought to give us that share of the load during peacetime, so it will be there when the war comes.

Now, I don't know exactly what their policy is, but I do know that the Army—and some of it appeared in the congressional hearings—said their policy was simply this—in fact, Charlie Wilson, of the Defense Department, indicated that was so, too, when he was over here, that they were going to divide their traffic—all things being equal; that is, rates and so on, 50–50 between the rails and the trucks.

I don't think that is a fair break. That isn't the way the traffic divides in the country, and I don't think that is the way they will do it in the time of emergency. There is something there that could be very helpful in connection with policy in that particular case, and not legislation.

Mr. VAN ZANDT. This morning in Mr. Budd's testimony he referred to alternate routing of trains, whether freight or passenger, in the event of emergency. Isn't it true, Mr. Symes, that if we abandon some of these alternate routes, that we may not have such privilege in the event of an emergency?

Mr SYMES. I think that would be so, and it would have to be watched pretty carefully as to the abandonment, and I think, all these having to go before the ICC it is something that they and the War Department should be watching very carefully, and I know they do, in that connection.

I know during the time of the two-party system in the East, we did recommend the abandonment of a lot of lines. I was on that committee. However, before we could, we had to go before armed services, the War Department, and everybody else, to show what we had in mind, and actually a couple lines we proposed to abandon, one of which was B. & O. between Philadelphia and Washington, and the C. & O. between Chicago and Cincinnati, they wouldn't even let us put in the the recommendation, because they felt they would be very much required in the event of emergency; so that would have to be watched.

Mr. VAN ZANDT. Now, you lay great emphasis on the results of Government aid to other forms of transportation. Do you advocate similar Government aid to the railroads?

Mr. SYMES. Well, I probably have been misunderstood in some places. I am really not advocating subsidy to the railroad industry. This car plan I am speaking about is not subsidy. It is a means of giving the railroads some temporary relief, and by that I mean opening the doors to a credit that is not now available to them to do the things which should be done, not only in wartime, but in peacetime, until we get on our feet and get some of this longer range legislation that will put us in a healthy condition.

But the only way we are going to get the equipment, as I see it—you can talk about all these other methods, penalty per diem that has been advocated, it won't do it at all. It doesn't make any difference what happens, if you can't get the credit, and you can't, well, you can't get cars. With penalty per diem or anything else.

Mr. COHELAN. Will the gentleman yield?

Mr. VAN ZANDT. Yes.

Mr. COHELAN. Assuming you get the necessary capital to do all these things which are so obviously required—and by the way, I am terribly impressed with this presentation; I think this is a most meaningful statement and should be very helpful to the committee. You are to be congratulated, and so is your staff.

Mr. SYMES. Thank you.

Mr. COHELAN. But supposing the Government does step in at this point and comply with your request or some variant thereof will do the job capitalwise, what is that going to do in terms of the real expansion of your market? How do you know you are going to capture the market or get the revenues that you are talking about, with this aid?

Mr. SYMES. Well first, we are running around the country, the Pennsylvania Railroad and a lot of other people, with an awful lot of old cars that should not be operated. And you are not holding them very long if you can get money for new equipment. There is a good return there in maintenance and in addition, if you don't have the supply of cars to meet the peaks and the valleys, which goes back to meeting customer requirements, plus the fact that you are always trying to get new industry on your railroad which you can't do if you have a chronic car shortage, but all of those other business considerations would justify going out and if you can have the good equipment we need, which would include piggyback which is coming into the picture——

Mr. COHELAN. You feel the business is there?

Mr. SYMES. Not only that, but more important, we would get rid a lot of these old cars which are about ready to—well they should

be scrapped. They are expensive to maintain, though it is a good gamble on anybody's part. You can't lose.

Mr. COHELAN. Thank you.

Mr. VAN ZANDT. Mr. Symes, what percentage of Government shipping is represented by all shipping?

Mr. SYMES. I can't give you the exact figure, but it is very, very substantial. I would assume that it would be—total Government would be more than 10 percent of the gross of the railroads in my opinion. In other words, of 10 billion I would say it would be a billion, almost. That is just grabbing at figures, but that would be my guess.

Mr. VAN ZANDT. In this last year business was bad and railroad carloadings were down, and then business started on an upward trend and it was necessary for the railroads to move into the car-building industry and to build cars overnight.

What did it cost in the way of dollars and cents?

Mr. SYMES. I would say that it did cost a good bit of money to do it that way, but there was no alternative for the eastern roads to do it any other way. Here we went into 1958, carrying over from 1957. Everybody thought business would be down but nobody ever thought it was going to be down as much as it was.

During the time that we were not repairing any cars—which we were not, not a car on the Pennsylvania Railroad, really—we had about 15,000 good order cars laying around and our cash was going down like this [indicating] and we didn't know where we were headed so we naturally couldn't go in there and repair those cars to store them along with 15,000 others that were already there until we found out where we were going.

Now we come into 1959 and we could realize with our percentage of bad order freight cars, 21 percent, and the upturn which had started very definitely and I think is going to continue, that we just had to get cars.

So we went out and are getting this year 23,500 freight cars, on the Pennsylvania alone. That is costing $215 million. That is over and above our regular repair program of $50 or $52 million in freight-car maintenance. We have programed for spending this year $265 million.

Now where did we get that kind of money? About 15 percent of it we got through the conventional method. Conditional sales. The rest of it we got through leases from other companies. We are not only building about 12,000 of them up at Altoona, we are building the rest of them, 11,000 or 12,000, Bethlehem Steel, American Car & Foundry, and so on, but it is through leases. We got that through banks, pension funds, insurance companies, and everybody else. Again it is all a full payback basis, naturally. And that is exactly a sample of what would happen, in my opinion, if such a fund were made available by the Government. Because what we have done, we can't repeat, I am sure. Nor can a lot of other railroads get into that market. So that is what that thing would do. And I think what we did is a good example of what would happen across the country.

And I would be back in there for a lot more.

Mr. VAN ZANDT. In the event an emergency had developed last year and the country was in immediate need of rail transportation, could the railroads have met the demand?

Mr. SYMES. Absolutely not. They couldn't today, and they won't within 6 or 8 months, but they should be getting ready for it. They certainly couldn't. Not from the experience of the other war.

When we went into the last war we had hundreds of thousands of freight cars stored in good order. We had locomotives set aside and an excess plant. Industry itself was not geared to the big production. It took them a year and a half to get there. So with the big surplus we had in facilities above industry, which they built up to, finally, we don't have it today. They are way ahead of us right now and if they expand, with what we have you would see the worst shortage that ever happened in my opinion.

Mr. VAN ZANDT. That is all, Mr. Chairman.

Mr. KILDAY. Mr. Brewster?

Mr. BREWSTER. Mr. Symes, I, too, would like to congratulate you and the Pennsylvania Railroad on the magnificent job and the tremendous amount of detail that you have compiled for us. It will be of great help.

Mr. SYMES. Thank you.

Mr. BREWSTER. I notice in your figures you continually refer to class I railroads.

Is there another substantial source of freight cars other than class I cars, or class I railroads?

Mr. SYMES. The class I railroads generally own about 1,700,000 cars and there is about another 300,000 which fall in the private-car category as well as some of the class 2 and 3 railroads. There is about another 300,000 over and above what the class I railroads actually own. Mostly private, tank cars, refrigerator cars, and so on.

Mr. BREWSTER. Your figures indicated that about half or more of your passenger cars were over 30 years old?

Mr. SYMES. That is correct.

Mr. BREWSTER. How long is it economical to operate these cars, or how long an emergency can you possibly continue to operate them?

Mr. SYMES. Well I will tell you, you can continue them a long time but you are spending a lot of money on them when you do it and that is an awful old age for equipment. You can, of course, keep maintaining and maintaining but they are struck out more by obsolescence than on the other end of them.

I was born in a little town of Glen Osborne, Pa. When I was about 10 years old, which was 52 years ago, they had a big celebration on a new parlor car that was running between Pittsburgh and Cleveland known as the Glen Osborne. I can remember it as a kid. We all went down to watch it go through.

Well I rode that car the other day between Philadelphia and New York. They will last a long time. But they are obsolete from the standpoint of peacetime. People won't use them. In wartimes you can crowd them in but as you do it costs money to maintain them.

Mr. BREWSTER. What about the age of your locomotives?

Mr. SYMES. Well the age of the locomotives is not a real factor because we have converted in the last 15 years as an industry completely you might say, from steam to diesel, and while there will be in the next few years, it will start to come in on these old diesels but as a whole, the motive power that we have is in good condition, but I would also say that we only own enough to pull the cars we own, and if we get any more cars we have to get more locomotives.

Mr. BREWSTER. The Interstate Commerce Commission has suggested to this committee that incentive car rental rates would provide an adequate national fleet of freight cars through encouraging the railroads to build their own.

Does this proposal make sense to you?

Mr. SYMES. Not a bit and I so testified before Senate and House committees within the last few months. All that would do—and I mean—as you know, there is a per diem rate of $2.75 per car per day. A Pennsylvania car if it gets on the B. & O., they pay us that and that is reciprocal as betweeen all railroads in the United States.

Well naturally some railroads collect more than they pay. In other words, they are what we call a credit railroad. A credit railroad is always and always has been, trying to get that per diem rate up. Why? Well to get more dollars in their pockets, naturally, and the debt fellow who is paying that rental is trying to keep it down, to save dollars.

So now they come around through pressure from the credit railroads. Let's get this per diem rate up as a means of increasing the freight-car fleet and actually it hasn't got a thing to do with it in my opinion. It just isn't there, it is so artificial. I think it would have just the opposite effect. Yet the ICC apparently have fallen for it hook, line, and sinker.

Mr. BREWSTER. How does the railroad industry as a whole feel about your Federal equipment plan?

Mr. SYMES. I would say that all the eastern railroads with the possible exception of one support it and the West and the South have taken no position one way or the other, although there have been some comments, even though that is an official position, that some of the other railroads, other than East, do not think too well of it. But it is the East that has the problem because they have not got the credit. The other thing is they do not have to come in. This is purely voluntary.

Mr. BREWSTER. If this plan is adopted, where would the cars be built and would there be any control or specifications that would have to be filed?

Mr. SYMES. There would be no change whatever in the way we now do it. The railroads would apply. With the approval of the ICC, they would place the orders the same as they do now, with their own specification, and the agency would loan them the money and that is all there would be to it. Just the same as we now, under conditional sales, borrow 80 percent and sometimes 100 percent, to buy equipment, from the banks—we go out and order it and do everything else and we continue it that way. We could put in our own shops or outside shops and would have the same flexibility.

Mr. BREWSTER. Would it be possible for the railroad industry to do this, itself, by setting up a credit pool? You state that some roads do not need assistance. Could the railroad industry pool its credit resources?

Mr. SYMES. I do not believe as a practical matter there would be a Chinaman's chance for this reason: Let us assume, for example, Santa Fe who have wonderful credit and a wonderful railroad, with some other railroad which does not have the credit, such as B. & M.; you would not find the Santa Fe, I would not think, or any of those railroads who have the credit to do this thing underwrite their credit

for some railroads whose credit was not good. I know I would not and I do not think they would, under the way we operate.

Mr. BREWSTER. One more "if." If this plan is adopted would you anticipate a substantial use by all the railroads and if the use were greater than the supply of credit created how would allocation be made?

Mr. SYMES. They would have to be made by the ICC based upon their knowledge of the fellow who needed it the worst.

Mr. BREWSTER. Thank you very much.

Mr. KILDAY. Mr. Cohelan.

Mr. COHELAN. Mr. Symes, I was interested—as a matter of fact I was a little astounded to find that after this very, very elaborate demonstration here, that the company is apparently not operating at a level which will show a return that is as good as the average of the industry. Now, how do you explain that?

Mr. SYMES. Do you mean us?

Mr. COHELAN. Yes.

Mr. SYMES. Well I will tell you: One of the things for the Pennsylvania and the eastern railroads, that has them bogged down, is the passenger deficit. Last year we made about $46 million net out of our freight operation, but $43 million of that had to go into the passenger train deficit. One year we made $110 million out of our freight and we had a $73 million passenger deficit. So we have that, plus the terminal expenses, where we have the shorter haul and these tremendous terminal expenses which are much greater, relatively, than they are on the longer haul railroads.

Another good example, we are more dependent probably, at least on the Pennsylvania; 30 percent of our gross freight revenue on the Pennsylvania comes from steel. Either as a raw material or finished product.

In 1958, and in 1957, steel was hit harder than anybody else in this economy. They were working only about 50 percent of capacity so naturally we were hit relatively harder.

Now, it started to come back and we were picking up relatively higher. Now, we have a steel strike and to give you some indication of what that means, if that steel strike last 30 days, it will cost the Pennsylvania Railroad $12 million in gross. If it lasts 60 days, it will cost us $30 million in gross, and if it last 90 days it will cost us $50 million in gross. Only about one-half of that we can recoup by very drastic reductions in forces, and mostly maintenance, which we should not be doing but we have to do it.

We have already laid off about 6,000 people as soon as the strike started and as it continues the traffic continues to go down and we will probably have to lay off three or four thousand more if it goes on into August. We ought to have these people on maintenance but that can eat into your cash so quick you just cannot gamble on it.

Mr. COHELAN. I do not remember whether you had the tabulation in the paper, here, but is there some kind of a series in here which shows comparatively your operating position with the other operating positions of other roads?

Mr. SYMES. Yes, it is in there. It shows on net income, gross revenues, and everything else, but the cause of it is that we do have this tremendous passenger deficit in the East, plus the terminal switching and the shorter haul.

Mr. COHELAN. Why are we doing better operationally in the West, the western railroads apparently than they are in the East?

Mr. SYMES. Several reasons. First, they have long haul freight business. Our haul is 240 miles per ton. Theirs is 400 to 500, so they get more revenue per shipment, naturally, on the longer haul.

As a result of that longer haul they have less terminal expense, and by that I mean shunting the cars around in the different terminals. They have a long haul, with less terminal costs.

Third, their passenger business generally is less than 10 percent of their gross. Ours is nearly 25 percent, on which we are losing this big passenger deficit. It is a combination of those things, and also we have much higher taxes because we have higher property values.

Mr. COHELAN. All these components when taken in, causes your problem?

Mr. SYMES. Yes. And then you want to know if 6 percent return is what you are after. That is a difficult question.

Some railroads have only two and he is usually the one who needs the equipment. The fellow who gets six or better he is already pretty well off in equipment.

If you could have a minimum of six—and that is what you ought to have for these railroads and maybe average seven or something like that.

Mr. COHELAN. Mr. Symes, do you have any trucking operations?

Mr. SYMES. Yes, extensive.

Mr. COHELAN. In other words you are going into these supplemental fields?

Mr. SYMES. We have gone into it for a long time and we have practically our entire railroad paralleled with our own trucking units. Not common carriers, understand, but our own trucking units.

Mr. COHELAN. This is all part of your basic operation?

Mr. SYMES. That is right.

Mr. COHELAN. I notice on page 111 that you are involved in quite a property asset liquidation.

Mr. SYMES.That goes to show that since World War II what we have had to do to get cash. The retirement of facilities—sure, we should do that, but we had to liquidate a lot of other property, such as the Hotel Pennsylvania in New York, the Greyhound Corp., our ferries, our water companies. We did it to get cash because we are not earning enough. And that cannot go on forever.

Mr. COHELAN. Am I correct in my impression that there are other railroad operations in the country that also have substantial diversion of holdings?

Mr. SYMES. That is correct; land, oil, gas. Unfortuuately we have not any oil and gas.

Mr. COHELAN. Now I ask you this, Mr. Symes: I am wondering, with this pattern of declining passenger service. what do you as an authority in the field feel the future holds?

Mr. SYMES. Well, I will tell you what I feel. We are divided up really into three categories on our railroad. First is what we call the long haul, and we do have through cars to the South and to Texas, through St. Louis, and we did have them transcontinental.

I think that the through passenger business, that is, a more than overnight haul, such as between New York and Chicago, New York and St. Louis, New York and Pittsburgh, and so on, Chicago and the

Twin Cities, I think we are going to have a lot of that business for a long time to come because it does not eat in on the business day and a lot of people still like the sleeping car service.

But on a long haul—from here to Texas or California or up to the Northwest—I think we might as well give it up because it is a lost cause, in my opinion. There is not going to be enough people who want to use it. And anybody who will go out and spend $300,000 on a seeper for that kind of business, and even if you filled it up at today's rates you would still lose a little money, I think that is not exercising very good judgment. Now that is No. 1.

I think on our railroad, as I say, between New York and Chicago, St. Louis, Cincinnati, and so on, that we will have an overnight service, and perhaps some day service, for a long time to come, in that area.

Next is between Boston and Richmond. Boston, New York, Newark, Philadelphia, Baltimore, Washington, and Richmond—this densely populated area in here where the potential is terrific, and the airlines are getting some of it but not too much yet, but the private cars are terrific. I think by nursing that service along with a good, fast service, with better equipment, a little faster than we now operate, at lower fares, that we can maintain our position in there for many, many years to come.

Now as to the commuter, which is a big thing on the eastern railroads, I think that that is a service that is certainly in the public interest and in everybody's interest, but private enterprise cannot operate it without terrific losses, and I think we are getting the thinking around to the various mayors and everybody else that we have to get subsidy, or whatever you want to call it, to provide that service. Tax relief or even direct subsidy, that is the only way it will continue. Yet it is in the public interest.

Mr. COHELAN. Focusing on the problem before us, the problem of the adequacy of transportation in a mobilization crisis, if the industry because of economic necessity continues with its policy generally of facing out more or less its passenger operation, what about the passenger car requirements in the event of mobilization?

Mr. SYMES. Well as I said a little bit ago, to handle the traffic that all railroads handled during World War II by reason of the ones that were dismantled, some 13,000, to get us back to the same capacity to handle the same load would cost the railroads over $2 billion in cars and locomotives to pull them. That is about how much we are deficient compared to then. But we are going to continue undoubtedly to dispose of these cars and tear them down, and I should think what the Government has already done in connection with about 1,500 sleeping cars which I think they have stockpiled, that they ought to step in there immediately and every car that is going to be scrapped, get their hands on it and stockpile it. Really, I do. That would at least be some help if they had an emergency.

I do not think the railroads can be expected to do the stockpiling.

Now as to freight cars, you mentioned that this morning, I believe. The plan I propose would eliminate the necessity in the next couple years of having to stockpile equipment.

Mr. COHELAN. Now I wonder, with the rate of disposition of these cars, would that be adequate for the mobilization requirement?

Mr. SYMES. During mobilization, yes, because they are going to be glad to get anything like they did during the last war.

Mr. COHELAN. Did we not use some freight cars in the last war?

Mr. SYMES. We did on the Pennsylvania. We used some of them in commuter service even. We put slats in boxcars and used some of them.

Mr. COHELAN. That is all I have.

Mr. VAN ZANDT. One more question.

Mr. KILDAY. Mr. Van Zandt.

Mr. VAN ZANDT. Mr. Symes, how long can the Pennsylvania Railroad continue to derive income through abandonments and liquidations, and so forth?

Mr. SYMES. We still have some of it, Mr. Van Zandt, but this tremendous program we have had since 1946, I would say is—that is only 10 years—some five times as much as we could hope to get during the next 10 years.

Mr. VAN ZANDT. Are you not, when you abandon one of your tracks on your main line, reducing the capability to handle emergency freight and passenger needs of the Government?

Mr. SYMES. Yes; there is not any doubt that your are reducing your capacity, but I think you will find in most cases where railroads are going from a two-track to a one-track railroad, they are at the same time installing what we call centralized traffic control which gives them not what a two-track railroad would have, but it does not reduce them to what we used to know as a single-track railroad, so there is capacity there, but I do not think anyone in their abandonments, particularly main line, are not thinking back to what they had in 1946, and it is true with the longer trains, by reason of diesels and everything, I think that even though reductions have been made, as of now at least, that we could still handle the war load from the standpoint of fixed facilities.

Mr. COHELAN. Mr. Chairman, just one further question that I forgot: On the manpower requirement, as I followed your testimony, Mr. Symes, it seems to me that there is a tremendous gap. What do you recommend to do about this question of manpower?

Mr. SYMES. Well, I will tell you. As you know, during World War II we had nearly a million and a half employees. Now, I predicted here we would be called upon to handle nearly a trillion ton-miles of freight and we do not have the cars. Now, let us assume we did have the cars and locomotives. How much force would you have to have to operate that plant and maintain it? I would guess by reason of the technological improvements, with the diesel locomotives in mechanization and maintenance, we could do it with about 400,000 more employees than we now have.

Mr. COHELAN. Could you tell us, How are you going to train them?

Mr. SYMES. We will just have to do it.

Of course, there are some furloughed that we could bring back and then we could train them. Not as quickly as we did before, and we will not have the women working on the railroads we did before, because we need qualified mechanics.

Mr. COHELAN. What do you think the time requirement would be to train people for this type of work in allowing for the range of skills and abilities required?

Mr. SYMES. It depends upon what kind of a market you are in. If you are getting young fellows out of school it might take you 6 months to train them as a suitable mechanic on diesels.

Mr. COHELAN. You haven't got that long.

Mr. SYMES. Well, maybe not.

Mr. COHELAN. There are all kinds of assumptions you can make.

Mr. SYMES. That is true; and in addition there isn't any doubt we would work our men, even if we had to pay overtime, Saturdays and Sundays.

Mr. COHELAN. I am thinking in terms of the training, Mr. Symes. There is a time factor here.

Mr. SYMES. It is a problem. It is a problem.

Mr. COHELAN. You can't put a person on strange equipment, with all the supplementary problems—I don't know a thing about railroading, but I know you have some——

Mr. SYMES. It is a problem, and, as I say, when we went into World War II, we had an unemployed force of 9 million people in this country Today, it is around 3 million. Even though there are 66 million employed. So you don't have the labor market there, I don't believe.

However, there would probably be a lot of civilian industrial production stopped, which might make some available to us. But I think we could get through it.

Mr. COHELAN. Thank you, sir.

Mr. KILDAY. Mr. Sandweg.

Mr. SANDWEG. Mr. Symes, since there have been recommendations made for improvement of railroad position financially, are you familiar with the article that appeared in the This Week magazine section of the newspapers last Sunday, by Senator Smathers, and his recommendation?

Mr. SYMES. I saw that.

Mr. SANDWEG. Would you care to comment on his statements concerning mergers and discontinuance of parallel tracks and things like that, as being of assistance to the railroads generally?

Mr. SYMES. Well, I think the matter of mergers of the railroads in this country is a "must" job over a period of time. I think he assumed—I am not sure—that if they merged into four systems—he drew a line down the Mississippi River and across the Ohio and so on, and cut it into four systems.

There isn't any doubt but what that would produce great economies, and maybe that is the ultimate, but it is my own opinion that would be too much to try to bite off in one bite.

But I think he is on the right track, and I think he used a billion dollars as the savings that could be effected with that kind of a system. I think he is on the low side.

But as you get that kind of money available, which is a long-term job, with all the procedures you have to go through, if we get a billion dollars out of a merger and another billion dollars or a half-billion dollars out of featherbedding, I am not even going to ask for this car plan.

I think Smathers is absolutely on the right track, except I believe in the first bite it will have to be done a little differently. He may have to have two competing systems in each of those four groups as step 1 before you take a bold step.

Mr. KILDAY. Thank you, Mr. Symes.

Do you have something to place in the record?

Mr. SANDWEG. We have a statement from the Pacific American Steamship Association, which they desire to be placed in the record.

Mr. KILDAY. Without objection, it will be placed in the record at this point.

STATEMENT OF MR. DEWEY OF THE PACIFIC AMERICAN STEAMSHIP ASSOCIATION

The Pacific American Steamship Association is a trade association and has within its membership the principal American-flag ship operators on the Pacific coast, including operators in the intercoastal, coastwise, noncontiguous, and foreign trade routes. We are pleased to see this committee inquiring into the defense posture of the American transportation system, and we welcome an opportunity to state our views in this matter as it relates to ocean shipping.

The role of our commercial shipping fleet in time of emergency is one which needs no rehearsal in these hearings. From the time of our Nation's independence down to the present day, merchant ships have spelled the difference between victory and defeat in international wars and local military situations wherever the U.S. national interest exists. But, I am sure this committee is not so much interested in a historical analysis as they are in the role ocean shipping can play in the present-day cold-war world in which we live.

In our view the document entitled "Maritime Status Report" prepared by the Joint Maritime Administration-Navy Planning Group, dated May 1, 1959 is concise and yet a conservative statement of shortcomings in our readiness to meet our shipping requirements in time of national emergency. The report has already been filed for the record in these proceedings and I would only reiterate here its tremendous importance in setting goals of achievement that are necessary if our merchant marine is to serve its traditional defense function in the future.

The steps outlined in the Maritime-Navy report are not steps which will necessarily increase the size of our commercial sealift. They are, rather, the minimum steps necessary to keep the status quo as regards the quality and quantity of our surface fleet. Indeed, they are the irreducible minimum below which this Nation cannot afford to fall.

In summary the report urges:

(1) Increase the subsidized dry cargo fleet to its statutory limits.

(2) Build two superliner passenger vessels.

(3) Incorporate additional defense features in future replacement vessels.

(4) Dispose of obsolete Liberty ships in reserve fleet. Retain at maximum readiness a priority list of first-line vessels in reserve fleet. Convert certain reserve fleet vessels to commercially useful vessels.

(5) Dispose of two of the four reserve shipyards.

(6) Keep effective control over U.S.-owned foreign-flag vessels.

SEALIFT VERSUS AIRLIFT

An analysis of the report indicates that it confines its terms to material we need in the way of a merchant marine and leaves out an important policy statement of the role of sealift capacity as compared with airlift capacity.

Sealift is now, and will be in the foreseeable future, the backbone of oversea transport. Particularly when large amounts of material are involved, sealift is unquestionably more economical than airlift. To cite an example: Let us assume that the Defense Department has

10,000 tons to move a distance of 8,000 miles. By aircraft this lift would require 122 cargo aircraft, making 4 trips each, and requiring 5 ocean tanker loads of fuel. This lift would occupy 24 days and would employ almost 100 percent of our military oversea airlift capacity. By sea, one mariner-type ship, in one trip lasting 22 days, could do the same job and would commit only 1 percent of our sealift capacity. Sealift is obviously not out of date. On the contrary, it is as vital in the missile age as it has been since the beginning of the Republic.

We make these comparisons because we hear persistent rumors of military plans and studies which call for a deemphasis of surface transportation. This committee should be aware of this kind of irrational thinking and should be prepared to recognize the folly of departing from a proven military necessity, which is inherent in our ocean passenger and cargo fleet. And this committee should be prepared to raise serious questions of cost should certain grandiose schemes for airlift as a substitute for sealift ever come to pass.

DEFENSE NEEDS ARE AN INTEGRAL PART OF MARITIME ACTS

The defense posture of the merchant marine has been clearly recognized by the Congress and the Appropriations Committees, and the 1936 Merchant Marine Act makes provision for a nucleus commercial fleet capable of serving both the defense and the commerce of this country. There are, at present, some 310 subsidized vessels which receive annual progressive replacement by means of construction subsidies. Certainly the Congress, in making provision in the organic statutes, as well as in annual appropriation acts, for this kind of assistance to an American industry must have continually reappraised the defense necessity of their actions and completely satisfied themselves that there is no other way to assure our role as a great power on the high seas.

We welcome an inquiry such as this, since it is the Armed Services Committee which is uniquely qualified to balance the needs of each form of transportation in meeting its defense commitments. We trust that any legislative acts or committee reports which stem from these hearings will restate once again the overriding importance of our merchant marine in serving as the "fourth arm" of our national defense.

PASSENGER SHIP DEFICIENCIES

The deficiencies in trooplift capacity on U.S. passenger vessels is alarming. Yet, in spite of legislative sanction, the administration made no provision for construction of the two superliner passenger ships in the 1960 budget. By what reasoning, and by what insidious influences was this omission made? Was it a purely budgetary decision, or has the Defense Department indeed undergone some change of views as yet unannounced? In our view, this committee is entitled to answers to these questions and so is the industry which is investing literally billions of its funds in the next few years to replace its currently aging fleets. Shall these adventurous maritime entrepreneurs go ahead with their plans or should they wait until this alarming situation is clarified? An answer from this Subcommittee on Transportation of the Armed Services Committee could go a long way toward eliminating the vaccilation and confusion that now surrounds the merchant marine.

NO SUBSTITUTE FOR U.S.-FLAG OPERATIONS

One component of our sealift defense potential is the 530 flag-of-convenience vessels owned by U.S. citizens but operated under foreign flags. This group, mostly tankers, is considered by the Department of Defense to be effectively controlled for requisition and use in wartime. We should be grateful that we have this defense component of controlled ships, but it is no substitute for full-scale U.S.-flag operations. Unless we create the competitive incentives for vessel owners to operate under U.S. flag, using U.S. crews and shipyard skills, we can only look forward to a further flight of U.S.-flag vessels to these flags of financial refuge.

DOMESTIC FLEET AS A DEFENSE AUXILIARY

My remarks thus far have been broadly addressed to the defense role of our ocean shipping in meeting our oversea commitments. Permit me to refer briefly to the importance of our ocean vessels serving our domestic commerce, and the unique role they play in this whole picture. Ships engaged in the continental U.S. deep-sea trade, as well as those serving Hawaii and Alaska, constitute a significant portion of the total U.S. merchant marine. As of March 31 of this year, domestic trade vessels constitute 372 out of a total of 952 active merchant vessels, or approximately 39 percent. The majority of these vessels—218—are tankships serving the coastwise trade. Of lesser number, but equally important, however, are the freighters serving the coastwise, 38; intercoastal, 43; and the noncontiguous, 59 trades of this country. While all vessels are indispensable in a military emergency, the vessels engaged in the nearby domestic trades are of a special significance to military planning because of their ready proximity for assignment wherever the military situation dictates. We are reminded of the fact that prior to the outbreak of World War II nearly all coastwise and intercoastal freight vessels were requisitioned by the Government and provided the nucleus supply line of our early military successes in North Africa and the Pacific theater.

Unfortunately, the future of most of our freight vessles engaged in the domestic trades is extremely uncertain. For a variety of reasons, most operators have not succeeded in setting aside sufficient reserves for replacement. However, the defense importance of this segment of our merchant fleet suggests the urgent necessity of either tax incentives or construction assistance lest we lose what has traditionally been our first echelon of supply auxiliary in time of emergency.

In further appraising the defense role of the domestic fleet, we would urge the committee's study of the document entitled "Review of the Coastwise and Intercoastal Shipping Trades" released by the Department of Commerce on January 10, 1956. This document spells out in great detail the significant highlights of the decline of the domestic segment of our merchant marine since the beginning of World War II and recommends certain positive steps be taken in restoring these trade routes to their former preeminence as defense auxiliaries and as integral units in our transcontinental transport system.

THE ECONOMICS OF SHIPS FOR DEFENSE

It is always a temptation to fall into the trap of the theorists who say, "If the United States can't compete (coastwise), let the foreigners do it." Or perhaps to say, "Since the United States is a part of the NATO merchant shipping pool, let's rely on NATO-flag merchant ships to supply our defense needs in wartime." Our European competitors have advocated these theories with unashamed vigor, and with a shocking amount of success. And, of course, our military enemies would like to see us adopt this thinking. The truth is, however, that our global interests require the United States be prepared for emergencies other than a NATO war.

Fortunately, this committee, and other committees of the Congress, have rejected these theories and have seen fit to do those things which enable our ship operators to at least hold the line. But it is a losing battle, and today we carry less than 15 percent of our own commerce in our own vessels. Balance this shocking statistic against the percentage of participation by U.S.-flag airlines in their trade routes and it is clear to see that the situation must get better, it cannot be allowed to get worse.

We simply cannot divorce economic considerations from defense considerations in this appraisal. Consider, if you will, the cost of the taxpayer and the Government in World War I when commercial freight rates skyrocketed as much as 1,700 percent (1914–18). At that time we had no U.S.-flag merchant fleet to speak of, and both the Government and the commercial shipper were at the mercy of foreign-owned ships. Compare the World War II situation where freight rates, because of control over a nucleus of American ships, increased only 40 percent for general cargo (1941–45). Certainly the perpetuation of a strong U.S.-flag merchant fleet carries with it certain economies to the Government in wartime which far overshadow the costs of a strong merchant-marine policy during the interwar year.

We know that 99 percent of the oversea lift in World War II and in the Korean conflict was handled by ship. It's just good business sense to do everything necessary in peacetime to strengthen our merchant fleet so as to preserve the element of cost control in wartime.

CONCLUSION

If our industry came to these proceedings for the sole purpose of seeking support for its own commercial aspirations, we would indeed be remiss. We come here because we know that from first-hand, recent experience (Korea, Indo-China, Suez, Lebanon) a limited war crisis can well become a race against time to evacuate nationals, redeploy troops and equipment, or to augment and resupply existing forces overseas. Such situations dictate a ready availability of sea transport capable of mobility and of serving areas where airports do not exist, or where they have been rendered useless by the enemy. However, our views in this matter of defense necessity are so forcefully stated by military leaders from all branches of the Armed Forces that it is their words and not ours which make the best case for a strong ocean transport component. No less an authority than Vice Adm. R. E. Wilson, Deputy Chief of Naval Operations, summarized the

views of the Navy Department in a statement on page 6017 of the Congressional Record of April 25, 1959, as follows:

Under the most optimistic assumptions, and on a quantitative basis only, the United States still possesses a marginal capability to carry out the sea transportation tasks of a general war.

There are serious qualitative deficiencies in our overall sealift capability, particularly in the dry cargo ship and the transport-passenger ship categories. The further aging of outmoded ships will aggravate this situation.

Perhaps the most persuasive statement made in the last decade comes from Gen. Nathan Twining, then Chairman of the Joint Chiefs of Staff, in October 1957, when he stated in a letter to Senator Butler his views as follows:

It seems incredible to me that anyone could argue seriously or with justification that new concepts of warfare obviate the necessity of further fostering a merchant navy. I assure you that such views are not held by the Joint Chiefs of Staff.

If the catastrophe of a general war should be forced upon us by the necessity of retaliation against surprise attack, the merchant marine, after the initial period of devasting nuclear exchange, would play a most vital role. Indeed, it might very well be the one scource of strength of the free world which would pluck victory from chaos. With land transport damaged beyond easy repair, only merchant ships, capable of plying the great highway of the seas, would be able to carry the essential raw materials and foodstuffs required for survival of the major population centers of the world as well as our Armed Forces overseas.

The Joint Chiefs of Staff annually consider the requirements for sea transportation in support of current war plans. Their studies of these requirements have shown, consistently, a dependence on the merchant marine for support of plans in mobilization and wartime. They are cognizant that a profitably operated merchant marine will provide the best mobilization base for rapid conversion to military use.

It follows that, in the opinion of the Joint Chiefs of Staff, the American merchant marine does have an essential role in the nuclear age.

Despite these forceful statements from the Pentagon and despite personal assurances from inside the administration that all is well with the merchant marine, there remains a constant erosion in the role of commercial sea power in defense planning. This administrative erosion is in sharp contrast to the persistent legislative mandates for a strong merchant marine as an integral part of defense planning and as a deterrent to a careless enemy. A strong policy statement from this committee is badly needed, and would be timely. Only then can the Armed Forces at home and overseas, as well as U.S. civilians abroad numbering in the millions, be assured of mobility in time of danger. And only then can this Nation be assured of its place on the seas as a great power.

Mr. KILDAY. The committee will now stand adjourned until Wednesday of next week.

(Whereupon, at 3:20 p.m., the committee adjourned to reconvene on Wednesday, August 5, 1959.)

ADEQUACY OF TRANSPORTATION SYSTEMS IN SUPPORT OF THE NATIONAL DEFENSE EFFORT IN EVENT OF MOBILIZATION

WEDNESDAY, AUGUST 5, 1959

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON TRANSPORTATION,
Washington, D.C.

The subcommittee met at 10 a.m., in room 304, Old House Building, Hon. Paul J. Kilday (chairman of the subcommittee) presiding.

Mr. KILDAY. The committee will be in order. We will continue our hearings this morning. We have with us Mr. Michael Fox, vice chairman of the Railway Labor Executives' Association.

Come around, and will you proceed with your statement in your own way, sir?

STATEMENT OF MICHAEL FOX, VICE CHAIRMAN, RAILWAY LABOR EXECUTIVES' ASSOCIATION

Mr. Fox. Thank you.

My name is Michael Fox. I am vice chairman of the Railway Labor Executives' Association. I am also president of the Railway Employees' Department of the AFL–CIO.

The Railway Labor Executives' Association is an organization of the chief executives of national and international railway labor unions which represent virtually all employees in the railroad industry. The chief of executives of the following rail unions are affiliated with our association:

American Railway Supervisors' Association.
American Train Dispatchers' Association.
Brotherhood of Locomotive Engineers.
Brotherhood of Locomotive Firemen & Enginemen.
Brotherhood of Maintenance of Way Employes.
Brotherhood of Railroad Signalmen.
Brotherhood of Railroad Trainmen.
Brotherhood Railway Carmen of America.
Brotherhood of Railway & Steamship Clerks, Freight Handlers, Express & Station Employees.
Brotherhood of Sleeping Car Porters.
Hotel & Restaurant Employees & Bartenders International Union.
International Association of Machinists.
International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers & Helpers.
International Brotherhood of Electrical Workers.
International Brotherhood of Firemen & Oilers.
International Organization Masters, Mates & Pilots of America.
National Marine Engineers' Beneficial Association.
Order of Railway Conductors & Brakemen.
Railroad Yardmasters of America.
Railway Employes' Department, AFL–CIO.
Sheet Metal Workers' International Association.
Switchmen's Union of North America.
The Order of Railroad Telegraphers.

I appreciate this opportunity to present the views of those whom I represent with respect to certain problems which we believe would confront the railroad industry in the event of a national emergency.

I think there can be no serious dispute that in the event of another war a disproportionate burden of both military and civilian transportation will fall upon the railroads. I think that it is equally clear that if such national emergency arose tomorrow, the railroads would be hard put to meet the demands which would necessarily be placed upon them. Furthermore, if present policies of the railroads are permitted to continue, their ability to meet the challenge of national defense will steadily decline.

The Association of American Railroads concedes that today's fleet of freight cars includes little emergency reserve capacity and that the most acute problem concerning transportation mobilization is to be found in passenger-carrying capacity. The railroad industry today is less prepared to meet a war emergency than it was in World War II, despite the fact that in that emergency, there was no possibility of devastation and destruction within our own boundaries and the consequent need for dispersed and increased capacity for rebuilding and repairs, as well as for more equipment and manpower.

I should like to discuss a phase of the national transportation problem which has not, to my knowledge, been presented to you or at least has been only casually mentioned.

It is the problem of manpower. One of the unique advantages over other forms of transportation in a national emergency which the railroads attribute to themselves is, as they say, the railroads' "shock troops"—the ever-ready track repair crews—skilled in coping with disaster. They speak of "a closely knit team of experienced railroad men and women numbering up to a million" who are ready to go to work at a moment's notice in support of the defense objectives.

There can be no doubt that the availability of adequate skilled and experienced manpower is one of the most essential prerequisites to the performance by the railroads of the job which would inevitably be theirs in case of another war.

I believe the statement made to you by Chairman Tuggle of the Interstate Commerce Commission on this subject deserves repeating. He said:

> Stepped-up utilization of rolling stock and associated facilities to provide additional schedules, faster service, and heavier loadings could not be accomplished to any significant degree with current levels of manpower in the transportation industry. And, of course, such intensification of use would involve a higher degree of wear on equipment and facilities and increase the factor of accidental damage probability, all of which would call for larger amounts of replacement parts, maintenance, repair and operating supplies.

Chairman Tuggle also observed that—

> The railroads ability to transport might be governed more by shortages of manpower and fuel, during a survival period, than by shortages of equipment and facilities.

What then is the manpower situation on the railroads?

Let us first look at the status of the railroad "shock troops"—"the ever-ready track repair crews" who are "skilled in coping with disaster."

In 1946, following the end of World War II, there were 265,685 employees in the maintenance-of-way and structures department of the

class I line-haul railroads in the United States. This number had declined to 134,122 in 1958—a reduction of nearly 50 percent.

Heavy reductions have been made in these classes of employees who maintain the tracks, bridges, and buildings. In the track department of class I railroads the 1946 employment was 200,810, while in 1958 it was 85,227—a reduction of 57.6 percent. In the 6 bridge and building classes, employment has been reduced from 31,396 in 1946 to 19,127 in 1958—a reduction of 39.1 percent.

While a portion of this difference in work force may be attributed to mechanization and other technological changes and abandonments of lines of railroads, the basic reason for the present figures becomes apparent when the railroads' policy of deferred maintenance is considered.

On February 15, 1953, the Engineering Section of the Interstate Commerce Commission's Bureau of Valuation issued a study on deferred railroad maintenance. Since track accounts dominated, the Bureau elected to ignore other accounts. This study showed that there was approximately $1 billion of deferred track maintenance on class I railroads in 1952. Class I railroads had an average of 228,411 track and bridge and building employees in the service (midmonth count of 16 classes) in 1952. They had an average of only 119,728 in 1958. Obviously, the situation has deteriorated seriously since the study was made in 1952.

Railroad presidents testifying before the Surface Transportation Subcommittee of the Senate Committee on Interstate and Foreign Commerce in January 1958 admitted that a considerable amount of maintenance work which needed to be done was being deferred. President James M. Symes of the Pennsylvania Railroad testified that the deferred maintenance of way and structures on his system totaled $132.9 million at that time. He said that this figure was not based on a formula but on the estimates of the company's own engineers.

The Pennsylvania Railroad has long been recognized and accepted as the representative carrier of the railroad industry. It comprises about 10 percent of the industry as a whole. If we project Mr. Symes' estimate for the Pennsylvania Railroad over the industry as a whole, we arrive at a deferred maintenance figure for tracks and structures of some $1.3 billion at the close of 1957. It is our opinion that this is a very conservative estimate.

The number of track and bridge-and-building jobs declined by some 35,000, or nearly 23 percent, in 1958 as compared to 1957. It is clear, therefore, that the situation with respect to deferred maintenance has deteriorated to an even more serious extent since Mr. Symes gave his estimate to the subcommittee.

The fact that the railroads and their employees did such a good job of meeting the Nation's transportation needs during World War II is no assurance that this all-out effort can be repeated in the event of another national emergency. The track and structures plant of the railroads has deteriorated. It would be extremely difficult to rehabilitate it in a limited time.

In the first place, the railroads now have little more than a skeleton force of maintenance-of-way and structures employees. Thousands of their trained and skilled workers have been furloughed. Many have obtained work in other industries. The manpower demands of a national emergency would unquestionably make it difficult for

the railroads to secure and train the needed additional workers to place their plant in adequate shape to meet the heavy traffic demands of the emergency.

Secondly, steel and other critical materials would probably be in short supply during an emergency, thus making it difficult for the railroads to obtain needed rail and other track appurtenances.

Finally, a national emergency with its critical traffic demands would be a very inopportune time for the railroads to attempt a major overhaul of their track and structures plant.

It is the opinion of military experts that the next national emergency will result in devastating air attacks on this country and that the railroads will be one of the primary targets. It is obvious from a review of the situation as it now exists that it would be impossible to keep the railroad plant in operation under air attack in view of the fact that the trained manpower and materials are not available, and men cannot be trained and materials cannot be produced overnight.

It is obvious, therefore, that if the carriers are to be adequately prepared to meet the heavy demands of a national emergency efficiently and effectively and the critical need to keep their lines in operation, the tracks, bridges, and structures must be rehabilitated and maintained at all times in a sound and safe condition, and an adequitely, sized, trained, and skilled force must be available to meet any crisis.

A situation comparable to the maintenance of way and structures department is found in the maintenance of equipment department.

Incidentally, Mr. Chairman, that is the group that I represent, in the maintenance of equipment, skilled shop.

In 1940, the class I railroads had 280,719 employees in its maintenance of equipment and stores department. During the war these forces were increased to a high of 389,176 employes in 1944. By 1949 maintenance of equipment employment declined to 320,782 and thereafter ranged between 300,000 and 350,000 employees until 1953, after which the forces declined steadily to a low of 196,594 in 1958. Forces have been increased slightly in recent months to about 200,000 employees, but this increase is hardly calculated to meet the serious bad order situation confronting the railroads.

It should also be observed that the railroads are not training sufficient additional skilled men to take care of future needs. For a number of years after the last war, the railroads had about 10,000 apprentices in training. In 1958 there were only 5,242 apprentices on the class I railroads.

Much of the reduction in forces has resulted from an imprudent policy of undermaintenance, representing a flagrant waste of skilled manpower and facilities, which has resulted in the worst bad-order situation since the beginning of World War II.

In 1940 when the bulk of the motive power was steam, about 15 percent of the locomotives were in shops or awaiting repairs. This was reduced to around 5 percent during the war period, but thereafter as additional diesel-electric units were added, the steam locomotives, bad-order situation became progressively worse. In 1950, 11 percent of the steam locomotives were in bad order, increasing to about 15 percent in 1957, and almost 45 percent in 1959.

Meanwhile, the number of diesel-electric locomotives in bad order varied between 1 and 2 percent from 1943, when the first separate

figures became available, to 1954. One factor which undoubtedly contributed to this result was the fact that large numbers of new units were being added each year, making them less subject to failure. Beginning in 1955, however, when a considerable number of diesel-electric locomotives began to need overhaul and rebuilding, the percent of bad-order units began to increase steadily, reaching a high of 5 percent in 1959.

The number of freight cars in bad order is the highest since 1940. In that year about 9 percent of the freight cars were unserviceable. This was reduced to a range of 2 to 3 percent during the war period. From 1946 to 1957 it fluctuated from a low of 3.9 percent in 1947 to a high of 7.7 percent in 1950, but in most of these years, it ranged from 4 to 5 percent. In March, 1959, however, it reached a postwar high of 9.2 percent. There has been a slight improvement since that time, but it appears that the carriers have done too little too late to meet the anticipated need for freight cars.

There are no figures on the number of passenger cars unserviceable, but on the basis of the record for locomotives and freight cars, as well as the lack of concern or interest of many railroads in passenger service, the percentage in bad order is undoubtedly substantial.

These conditions prompt us to endorse Chairman Tuggle's statement to you that:

> Although there has been an upturn in improving freight fleets and the number of serviceable cars by augmented repair programs, based on improvements in traffic and increases in revenue, the on-again, off-again policy of providing good maintenance and maintaining adequate car fleets, is contrary to any commonsense approach to maintaining railroads in condition to carry the load in time of national defense emergency.

During the postwar period, steam locomotives have been virtually all replaced by diesel-electric locomotives. In 1940, the class I railroads owned a total of 41,721 locomotives of which 40,041 were steam and only 797 diesel-electric units. In 1946, they had a total of 42,841 units of which 37,551 were steam locomotives and 4,441 were diesel-electric units. In 1958, the total number of units owned declined to 29,560 of which 27,585 were diesel-electric units and only 1,387 were steam locomotives. About 45 percent of the steam equipment is unserviceable and most of the remaining units are stored which accounts for the fact that about 95 percent of the traffic is now handled with diesel-electric units. Because of the improved tractive effort and greater utilization of diesel-electric locomotives, fewer are required, but with 5 percent of the diesel-electric units unserviceable, this leaves only a total of 26,196 units serviceable on January 1, 1959.

The transition from steam to diesel over the past 15 years makes precise comparisons on the basis of the number of units difficult, but in terms of total tractive effort of all types of locomotives, it is significant that in 1944, when the peak in traffic was reached during the war, the railroads had command of a total of 2,317 million pounds of tractive effort; in 1958 this was reduced to an estimated 1,815 million pounds, and if the locomotives in shops awaiting or undergoing repairs were deducted, this figure would be considerably less.

The freight car situation is even more serious because the carriers have not only failed to increase their freight car fleet but have actually held back programs to replace and rehabilitate their existing equip-

ment, resulting in a large net loss in the number of serviceable cars available.

At the end of 1944, which was the peak year of wartime freight traffic, the class I carriers owned 1,750,279 freight cars of all types. With only 2.4 percent of the cars unserviceable, this was a net of 1,707,854 cars available for service. On January 1, 1959, the class I carriers owned 1,725,723 freight cars of which 148,015, or 8.6 percent, were unserviceable, leaving a net of 1,577,708 cars available for service. Even though the average capacity of freight cars has increased, this represents a decline of well in excess of a hundred thousand cars since 1944.

The seriousness of this situation is indicated by the fact that despite the low level of traffic last year, car shortages developed in the heavy loading periods of the year, reaching a peak shortage of 7,495 cars per day in the week ended October 18, 1958. Traffic levels to anything like that of World War II would, therefore, find the railroads wholly unprepared.

The ownership of passenger cars has declined with the decline in railroad passenger traffic. In 1944, when passenger travel reached its wartime peak, the class I railroads owned 37,837 passenger cars, which, added to the 8,751 Pullman Co. cars, totaled 46,588 cars. In 1957 the number of railroad-owned cars declined to 29,473, the number of Pullman Co. cars declined even more to 3,970 cars, so that the total number of cars was reduced to 33,433. This is a reduction of 13,145 cars since 1944. The number of Pullman-owned cars for 1958 is not available, but the number of railroad-owned cars declined by 913 cars to 28,560.

There can be no doubt that in the event of war all available equipment would be put to immediate use and as rapidly as additional cars and locomotives could be repaired and made ready for service they would be utilized. Thus, those employees who are depended upon for the movement of trains would be in sharp demand. Here again we find a substantial shortage of manpower.

In 1940 the class I railroads employed 59,717 engineers and firemen in road service. In 1946 that number had increased to 76,750. But in 1958 these classes of employees numbered only 43,564. In yard service there were 29,725 of these employees in 1940, 40,061 in 1946, and 34,202 in 1958.

Substantial reductions have also been made in train service employees in freight, passenger, and yard service. In 1946 there were 153,610 train service employees in freight and yard service while in 1958 there were 121,322. In passenger service the number had decreased from 26,141 in 1946 to 20,638 in 1958.

I believe that these employment figures which I have cited are sufficient to demonstrate the tremendous depletion of manpower on the railroads, and I will not burden you with additional statistics except to say that the reduction in the number of other classes of railroad employees would be comparable. The overall situation is best illustrated by the fact that in 1940 the total number of railroad employees was 1,026,956; in 1946 it was 1,358,838; and in 1958 the number had decreased to 840,575.

Men cannot be stockpiled and thus held in reserve for national emergency. Railroad employees are, for the most part, highly skilled and specially trained for railroad service. In most classes of railroad

employment, apprenticeships or extensive training periods are required. Many jobs are peculiar only to the railroad industry, such as the classes of transportation employees—the engineers, firemen, conductors, trainmen, dispatchers, agents, telegraphers, yardmasters, and others, who acquire their skill and experience only by doing this work for a railroad, and most of these jobs require skills that cannot be acquired overnight, but require months and years of training.

Maintenance of equipment employees, such as machinists, carmen, electrical workers, sheet metal workers, and others, must serve approximately 4 years' apprenticeship to qualify as skilled mechanics.

Maintenance of way and structures employees, such as section foremen, inspectors, bridge and building foremen, and many others, require skill and knowledge of the railroad industry.

Signal and communication employees, certain types of clerical employees, and others that could be mentioned who are so indispensable to railroad operation, cannot be acquired on a moment's notice.

In a national emergency it is reasonable to expect that manpower controls would become effective immediately. Jobs would probably be frozen and the railroads would be no exception. Stockpiled equipment which could not be manned, stockpiled repair parts which could not be applied, bad order cars and locomotives which could not be repaired, and trains without crews would be catastrophic.

What then would be the source from which railroads could acquire the trained and skilled forces needed to properly carry out the tremendously stepped-up transportation requirements? To us, the answer is a simple one. Unless the railroads maintain during peacetime a stabilized force which within reasonable limitations could fill the manpower requirements of a war emergency, they could not perform their defense assignment.

President Loomis of the Association of American Railroads has told you that the industry should be encouraged to build up capacity now while the manpower and materials are available and "not when an emergency is upon us and our resources are critically needed in other vital areas of war work." We agree.

It is our view, however, that to a large degree the reduction in railroad employment and the potential manpower shortage in case of a national emergency can be traced directly to unwise and unsound policies which many railroads have followed in the past and in which they are still engaged.

Some railroads have all but abandoned their shop facilities while others have greatly reduced the amount of work performed in their own shops and have disposed of their idle machinery and equipment. These carriers are contracting some or all of their work to outside companies or are failing to perform what constitutes adequate maintenance.

The extent of the abandonment of these railroad shop facilities and the contracting out of the repair and rebuilding of locomotives and cars are matters on which there is little or no information made available to any responsible agency of our Government. We feel very strongly that the lack of such information is not in the best interests of national security and is a matter which should be an essential subject of a thorough investigation in the interests of national defense.

Meanwhile, by way of contrast, some railroads have utilized their shop facilities for the building of new cars over the years. In 1957,

for example, they built 42,892 freight cars in their own shops, constituting 43 percent of the total cars delivered. In addition to investigating the extent of abandonment of facilities and the contracting out of work, a careful survey should also be made to determine to what extent railroad shop facilities should be utilized to build new cars and rebuild cars and locomotives.

The extensive use of railroad shop facilities for these purposes would prove more economical in our opinion, and would contribute much toward increasing the depleted freight-car fleet, as well as taking up the accumulated undermaintenance reflected in the bad-order ratios of cars and locomotives. It would also stop the waste of skilled manpower and incidentally reduce the drain on the railroad unemployment insurance fund which since 1942 has paid a total of almost $100 million to the skilled shop employees in the railroad industry.

An example of the practics to which I have referred is that of a number of railroads in abandoning the facilities at which certain component parts of their diesel-electric locomotives were rebuilt or repaired and sending the repair and rebuilding work to the Electro-Motive Division of the General Motors Corp. at LaGrange, Ill., as well as other similar types of operations. I cannot give you specific information on the extent of these practices because there are no published figures available.

However, on the basis of other evidence I believe it to be substantial and that the Electro-Motive Division of General Motors Corp. and others have a virtual monopoly over this type of work. But we do know for certain that in the aggregate a substantial number of skilled railroad employees have been permanently separated from the industry who otherwise would be available in any national emergency.

Mr. Nelson C. Dezendorf, vice president and general manager of the Electro-Motive Division of the General Motors Corp., in a featured article that appeared in the Chicago Sun-Times, December 28, 1958, pointed out that a sizable business in overhauling diesels is beginning to develop and was quoted as follows:

> The early model diesels are about 12 to 15 years old now and will start needing overhaul jobs. We expect to overhaul an average of 1,000 units a year from now on.

Incidentally, according to the best information we have been able to obtain there is no contract between any individual railroad and any of these concerns such as mentioned above that obligates them beyond the specific contract for the work given to them on each occasion, which I am certain all of you will agree would be a very undesirable situation were it to develop that they were no longer able to or capable of continuing this work. These practices continue to spread and it is our view that it is dangerous from the standpoint of national defense not only for manpower reasons. The surrender of the control over the maintenance and repair of locomotives could seriously impair the efficient operation of the railroads involved if, for example, the Electro-Motive Division or other similar operations were to be converted to other uses for national defense purposes or if they should be inactivated by enemy attack, sabotage, or any other cause. One of the greatest defense assets of the railroads is the wide dispersal of their repair shops and facilities and their invulnerability to enemy attack.

I have already referred to the practice of railroads of deferring maintenance on a haphazard basis which has resulted in car and motive power shortages and which I pointed out before has been characterized as contrary to any commonsense approach to maintaining the railroads in condition to carry the load in times of national defense emergency. These same conclusions may be drawn from the marked if not dangerous deterioration in track and essential structures.

All of these things have resulted in reduction in force, instability of employment, and the permanent separation of thousands of skilled employees from the railroad industry.

Last year Congress enacted legislation intended to establish a means by which the railroads under the supervision of the Interstate Commerce Commission could effect the elimination of passenger-train operations which were unneeded and unprofitable without the alleged unjustifiable interference practiced by certain State regulatory bodies. The result which we believe was not intended by Congress was, in effect, a delegation to the railroad companies of this country of direct authority to determine whether, and the extent to which, they should serve the public and the requirements of the national defense. Since the enactment of this law 21 railroads have filed 48 notices or petitions to discontinue 156 passenger trains and 2 passenger ferries in 30 States and unless this law is changed, it is reasonable to assume that this trend will continue.

The employees in the railroad industry and the railway labor organizations representing them are well aware of the need for a strong, economically sound railroad transportation system. We are cognizant of the fact that our welfare depends directly upon the welfare of the railroads of this country. We are in accord with the announced purpose of the Transportation Act of 1958, which is to aid the railroad industry—

> in acquiring, constructing or maintaining facilities and equipment for such purposes, and in such a manner, as to encourage the employment of labor and to foster the preservation and development of a national transportation system adequate to meet the needs of the commerce of the United States, of the postal service, and of the national defense.

We are all well aware of the competitive problems facing rail passenger service. This statute, however, rather than encouraging the railroads to compete with other forms of transportation, encourages them to give up efforts at such competition and withdraw from the field of passenger transportation.

For some years it has been the practice of many railroads actively to discourage passenger patronage. The Interstate Commerce Commission, on May 25, 1959, issued its report in the *Railroad Passenger Train Deficit* case. In the course of its discussion of this problem, it stated—

> that the railroads are best suited to volume carriage and that in order to put passenger travel on a paying basis they must devise ways of encouraging volume traffic. This necessitates consideration of fare adjustment and further fare experimentation (in the form of incentive fares for family groups, for instance), as well as improvement of facilities and service to the end that patronage will be attracted rather than repelled.

More than 600 railroad employees have lost their jobs as a result of the train discontinuances which have already taken place under this law.

In addition to numerous train discontinuances thousands of miles of railroad, many stations, and other facilities have been abandoned since the end of World War II with a resulting reduction in railroad forces.

The railroads have suggested that they be encouraged to build up capacity now while manpower and materials are available. They suggest that this be accomplished by certain tax relief such as permitting tax deductions for certain modernization programs, more rapid depreciation schedules, repeal of Federal excise taxes on passenger fares, the amendment of Federal laws to encourage local and State property tax relief, et cetera.

But no amount of relief of this kind in our opinion would solve the manpower problem unless it is conditioned on the reversal of the policies which many railroads are now pursuing and which are the direct cause of permanent reduction in the number of available railroad employees. Make no mistake about the fact that many of these employees are leaving the industry permanently and obtaining other employment and few are being trained to take their places.

The railroads point to their superior capacity to handle national emergency traffic because of the very nature of rail service—because "when gasoline and rubber supplies diminish and other traffic grinds to a halt" the railroads will take up the slack. Yet in the name of national defense they seek unrestricted authority to engage in other modes of transportation by waterways, highways, and airways, much of which would be substituted for existing rail service with the result that existing rail facilities, equipment, and manpower would be further curtailed.

It is our view that the interests of national defense insofar as manpower is concerned may be achieved only in the following manner:

The railroads should stop the abandonment of their rebuilding and repaid facilities and the practice of contracting out repair and rebuilding work and should exert every effort to improve, modernize, and expand such facilities to provide economical and efficient repair service on railroad properties performed by their own employees.

The programing of heavy repairs, rebuilding of cars and locomotives and the maintenance of tracks and structures should be on an annual basis so that manpower may be conserved, employment reasonably stabilized, and equipment, tracks, and structures may be kept in a condition necessary to meet a war emergency.

If existing economic conditions require tax relief suggested by the railroads or even if it requires direct subsidy, it should be accorded only to those carriers which are willing to meet specified standards in connection with repair and maintenance, stabilization of railroad employment, and maintenance of equipment, tracks, and structures.

The attitude of some railroads toward the passenger business should be reversed and efforts made to attract such business rather than to divert it, through improved service and aggressive efforts and experiments designed for that purpose. The laws permitting wholesale discontinuance of passenger trains at the whim of the railorads should be amended or repealed.

Railroad labor has always willingly risen to the occasion in times of national emergency and its desire to continue to do so is undiminished. It believes that the railroads are "one of America's greatest

national defense assets." It believes that the industry is entitled to some direct relief from inequitable competitive conditions which undoubtedly exist. But it also believes that there is a corresponding obligation on these carriers to change some of their self-imposed policies which are detrimental to the public interest and the national defense.

May I say in closing that this committee is to be highly commended for undertaking this inquiry into so vital and critical a subject. Thank you for the opportunity to appear before you and express the views of railroad labor.

Mr. KILDAY. Thank you, Mr. Fox. Your statement is so complete and detailed I have no questions.

Mr. Van Zandt?

Mr. VAN ZANDT. No questions, either, Mr. Chairman.

Mr. KILDAY. Mr. Becker?

Mr. BECKER. No, I have no questions.

Mr. SANDWEG. I have no questions, either, Mr. Chairman.

Mr. KILDAY. You did too good a job.

Thank you very much, Mr. Fox.

Mr. BECKER. Last week I injected in the record a copy of a newspaper article in reference to a program made and studied by the Defense Department. I said I was sending a letter to get answers to certain questions, to the Secretary of Defense. I have sent such letter and I would like to insert my letter in the record, with the questions asked here, and when I receive the reply, also insert that letter in the record.

Mr. KILDAY. Without objection your letter to the Secretary will be included and at this time, if there is no objection, you may include the reply and additional correspondence when received.

Mr. BECKER. Thank you, Mr. Chairman.

(The letter referred to follows:)

AUGUST 5, 1959.

Hon. NEIL H. MCELROY,
Secretary of Defense,
Department of Defense,
Washington, D.C.

DEAR MR. SECRETARY: I call your attention to the attached newspaper article which states that Air Force Secretary Douglas has made an about face on previously coordinated policies of the Defense Department regarding development of a national all-cargo fleet.

As a member of the House Armed Services Committee, I brought up the question of this newspaper report at our hearings July 29 in which we have been conducting an investigation on the adequacy of transportation in the event of mobilization. No satisfactory explanation of this report is yet forthcoming and, therefore, I direct the question to you as the appointed head of our Defense Establishment.

I am aware of the fact that new policies relating to the military role of the MATS and joint military-civil development of a national aircargo fleet have been formulated and coordinated within the Department of Defense. I understand that these policies were endorsed by Air Force Secretary Douglas in a memorandum directed to General White dated April 17, 1959, that this new policy was contained in letters from Assistant Defense Secretary McGuire to Senators Monroney and Symington dated May 8, and that the policy was further explained in testimony by Assistant Defense Secretary McGuire, Assistant Air Force Secretary Taylor and Federal Aviation Agency Administrator Quesada before the House Military Operations Subcommittee. In view of these facts, it is disturbing to me to see reports in the press that implementation of these policies is being halted by those who already have endorsed them.

Therefore, I will appreciate it if you will give me an expeditious answer to the following questions, in order to clear the record on this matter:

(1) The newspaper report states President Eisenhower asked you for a MATS study more than a year ago and that you have not yet given this report to the President because of its being held up by those who have changed their minds on basic coordinated policies.

I would like to know if this is true.

(2) I would like to know also if it is true, as the newspaper report states, that "Secretary of the Air Force James H. Douglas and some of his aides no longer accept the proposed new concepts for the military air transportation service which they previously had endorsed."

(3) I understand that one of the U.S. international all-cargo airlines has submitted a plan to your Department for military cargo airlift based on the new policies as enunciated by Defense Department spokesmen, and that no affirmative reply has been made to this proposal since it was submitted to the Department of Defense on June 16, 1959. In the meantime, the Department of the Air Force has issued invitations for bid to commercial airlines based on old policies and procurement practices which have been characterized by the CAB as "destructive."

A very early reply with answers to the question raised above and the newspaper article enclosed is of extreme and urgent importance. In view of the fact that I injected this article and the questions pertaining thereto at the hearing of the Subcommittee on Transportation of the House Committee on Armed Services of which I am a member, your reply will be inserted in the record. I stated at the hearings that I was directing such a letter and questions to you.

Sincerely yours,

FRANK J. BECKER, *Member of Congress.*

cc: Hon. James H. Douglas, Secretary of the Air Force, Department of the Air Force, Washington, D.C.

Mr. KILDAY. This concludes our hearing this morning. We will adjourn, subject to the call of the Chair.

(Whereupon, at 11 a.m., the subcommittee adjourned to reconvene at the call of the Chair.)

ADDITIONAL CORRESPONDENCE BETWEEN CONGRESSMAN BECKER AND THE DEPARTMENT OF DEFENSE

ASSISTANT SECRETARY OF DEFENSE,
Washington, D.C., August 31, 1959.

Hon. FRANK J. BECKER, *House of Representatives.*

DEAR MR. BECKER: This is in reply to your August 5, 1959, letter to the Secretary of Defense requesting reply to three specific questions which arose in your mind as the result of a July 27 article in the New York Herald Tribune with regard to Department of Defense policies for the development of a national all cargo fleet.

With respect to your first question which concerns the possibility of a holdup in the MATS study because of a change in mind within the Department of Defense on basic coordinated policies, I must state that such a report is purely conjecture. The detailed data for the study on MATS is undergoing review in the Office of the Secretary of Defense. Upon completion of the study, a report of the findings will be submitted to the President as he requested.

Relative to your second question as to whether Secretary Douglas or some of his aides no longer accept proposed new concepts which they had previously indorsed for the Military Air Transport Service, the Hon. Perkins McGuire, Assistant Secretary of Defense (Supply and Logistics), before the House Subcommittee on Military Operations stated in April 1959: "As a long-range objective, subject to the availability of modern, economical long-range commercial cargo aircraft, civil cargo airlift will be contracted for in peacetime to support to a substantial degree overseas logistics supply."

The Honorable Philip B. Taylor, Assistant Secretary of the Air Force (Materiel), reiterated this policy and further stated to the subcommittee: "It is hoped that this policy, which will guarantee a uniform airlift capacity for theater transportation of high value cargo, will encourage the other military departments to look to airlift to satisfy a larger portion of their transportation requirements.

Greater reliance on the airline industry for the logistics mission will also insure uninterrupted support of theater forces in times of emergency when the military airlift is devoted to tactical or strategic deployments."

There has been no change in the policy announced by Secretaries McGuire and Taylor at the above-mentioned hearing.

The last question of your letter is addressed to the submission of a plan by an international all-cargo airline premised upon its interpretation of the new policy enunciated by Defense Department spokesmen. Such a proposal was received by the DOD, and it is indicated that more carriers will submit similar proposals. This proposal has certain meritorious aspects, and it requires careful consideration. As you can appreciate, extreme care must be used in the expending of our defense dollars so as to achieve the maximum defense potential. This evaluation is currently progressing to the point where it is expected that a reply can be made shortly to the carrier concerned.

We appreciate your interest in this matter. Please let us know if we can be of any further assistance to you.

Sincerely yours,

PHILIP LEBOUTILLIER, Jr.,
Acting Assistant Secretary of Defense (Supply and Logistics).

SEPTEMBER 8, 1959.

Hon. NEIL H. MCELROY,
Secretary of Defense,
Department of Defense,
Washington, D.C.

DEAR MR. SECRETARY: My letter of August 5 called your attention to a newspaper article which states that Air Force Secretary Douglas has made an about-face on previously coordinated policies of the Defense Department regarding development of a national air cargo fleet. I said that I was aware of the development, coordination and enunciation of these policies within the Defense Department and the Air Force, but that it was disturbing to me to see reports in the press that implementation of these policies is being halted by those who have already endorsed them.

I now have a letter from Mr. Philip LeBoutillier, Jr., Acting Assistant Secretary of Defense for Supply and Logistics, which purports to answer my inquiry to you of August 5 by repeating the general statements of defense policy of which I said I already was aware.

My inquiry concerns implementation, not mere reiteration, of policies that are 5 years or more old. President Eisenhower's civil air policy, promulgated in May 1954, stated the administration's view quite clearly to be that "the Department of Defense should continue its policy not to engage in competition with private industry, and to support the expansion of the Nation's civil airlift capacity on an economically sound basis * * *. The Government should, to the greatest extent practicable, adjust its use of air transportation so as to use existing unutilized capacity of the U.S. air carriers."

The President said that his civil air policy "reflects this administration's central objective in this field." Since that time, the Congress, the Civil Aeronautics Board, the Federal Aviation Agency, and the Department of Commerce have repeatedly asked for implementation of U.S. civil air policy.

I understand quite well that Assistant Secretaries in Defense and Air Force reiterated civil air policy in recent hearings, but my question, which was asked in the Armed Services Committee hearing, and in my letter of August 5 to you, still remains—When is civil air policy going to be implemented?

The newspaper article which was attached to my letter to you of August 5 stated that administration policy is being thwarted by one man in the Defense Establishment—Air Force Secretary James H. Douglas. I asked you if this is true. The reply received from Mr. LeBoutillier does not answer this question, but refers to what other DOD spokesmen have said recently. In the meantime, there has been a growing flood of articles in the press about the obstruction of the administration of civil air policy by Air Force Secretary Douglas. Just a few of these articles are attached to this letter as examples.

The administration cannot afford this type of publicity regarding sabotage of established policy by a member of the "team." The only way to stop such rumors is to require implementation of the President's civil air policy immediately.

The third and last question I posed to you in my letter of August 5 concerned acceptance of airline proposals submitted to DOD in accordance with the policy

which has been established and reiterated so many times. Mr. LeBoutillier's reply postpones decision on this question, and adds "As you can appreciate, extreme care must be used in the expending of our Defense dollars so as to achieve the maximum defense potential." However, the airlines concerned have been told that their proposals will be judged by the Air Force simply on peacetime transport costs, rather than on national defense and national interest requirements. I think that this impression should be cleared up by the Air Force officers who gave it.

In conclusion, Mr. Secretary, I strongly request and urge that you and your staff give consideration to a more definitive reply to my inquiry of August 5 and to effect immediate implementation of long-standing Government policy which will advance U. S. commerce in the national defense and to scotch current rumors that implementation of these policies is being held up by the Secretary of the Air Force.

With best wishes, I am

Sincerely yours,

FRANK J. BECKER,
Member of Congress.

[Airlift, September 1959]

PERSONAL VIEW: QUESADA 0, DOUGLAS 0, CARGO 0

This is a sad, sad story. It is especially sad because it's true.

The Quesada-Monroney plan to legislate guaranteed loans for operators ordering new all-cargo aircraft as a Government push to the development of a big air cargo industry has hit a real snag.

Why? Because no less a person than the quiet, reserved, and ordinarily conservative Secretary of the Air Force, James H. Douglas, blocked the plan at interdepartmental meetings at the White House.

Does that mean that the Secretary of the Air Force opposes the development of an air cargo-industry?

Of course not.

Then why was he the lone Government holdout against a constructive program? Because he has a price for his support, The Secretary has come out of his well-insulated isolation booth in the Pentagon to fight doggedly for funds to provide Military Air Transport Service with a fleet of costly new jet passenger planes.

Is that bad? Well, that depends on your point of view. If you favor State socialism, if you favor Government encroachment on private business, then you must favor modernizing MATS.

And it just happens that FAA Administrator Elwood "Pete" Quesada, who was nothing less than a lieutenant general in USAF himself, believes that MATS (and the Government) should get out of the airline business and let commercial enterprise get on with the job.

It is Mr. Queseda who has led the fight to block MATS from getting new jet passenger planes. Does this mean that Mr. Quesada is against giving more airplanes to MATS? Not at all. He just happens to think that MATS should acquire the special-purpose type of military aircraft which the military needs for strategic purposes and stop acquiring more airline planes with which to compete with private enterprise.

So Messrs. Douglas and Quesada have been at loggerheads over a principle. Mr. Douglas wants his airline planes, and since Mr. Quesada blocked him, Mr. Douglas has very neatly blocked the all-cargo program which Mr. Quesada and Senator Mike Monroney of Oklahoma had hoped to rush through Congress during the session just closed.

It is rather strange to see Secretary Douglas, a former director of American Airlines, take such a determined attitude toward strengthening and continuing a Government-owned and Government-operated airline—"The People's Airline"—it has been called. An extremely valuable and vital organization within its original concept, MATS has strayed far, far away from its assigned job. It has become a prize example of an entrenched and creeping state socialism at work in an unsuspecting Republic. It transports such vast numbers of families with babies that it has aptly been referred to as "the longest diaper line in the world."

There is much to be said for Mr. Quesada's position. If MATS is permitted to modernize its Soviet-style airline, it stands to reason that privately owned and operated airlines won't be able to order as many new aircraft so long as they

can't control the complete transport market. The big issue of whether MATS will be permitted to continue to grab off under pure state socialism a very large transportation market is now at hand. Congress refused to provide the funds at the session just closed, but MATS will try and try again as all such bureaucratic organisms do.

The MATS argument for new airline jets is quite spurious. No military organization has ever had the gall to ask for funds for its own railroad. Why should a military organization have an airline that is competitive? Out-size and special duty airplanes, sure. But somebody has been doing some mighty screwy and mixed-up thinking about the true MATS role, and we are very sorry to see an able, sincere man like Secretary Douglas permit himself to be taken—and taken he is.

So—all the well-laid plans for a real boost for air cargo, and the development of efficient and low-operating-cost cargo airplanes, have to be laid aside until next session. We hope Mr. Quesada continues the battle. This country has done enough progressing toward Soviet ideology without adding some more in the air transport business. Meantime, we wish Mr. Douglas, who has already been reprimanded by higher authorities for his lobbying, would harken back to the principles of private enterprise on which this country and its progress have been founded. MATS should get all of the special-type military airplanes it needs. But let it get the hell out of the airline business.

[The New York Times, Aug. 30, 1959]

MATS Attacked in Congress Again

Two Senators See Conflict Between Airline Operation and Military Mission

(By Edward Hudson)

The Air Force's Military Air Transport Service came under renewed attack last week in Congress in the wake of Air Force opposition to plans for a privately run national aircargo fleet.

Proposals aimed at establishing the cargo fleet have been submitted to President Eisenhower by Elwood R. Quesada, Federal Aviation Administrator. They call for turning over to private carriers the bulk of MATS routine "pipeline" traffic.

In addition, the Government would assist airlines in buying efficient new cargo aircraft by guaranteeing up to 75 percent of private loans made to carriers for the purchases.

The purpose is to build up at private expense a sizable fleet of cheaper-to-operate cargo planes that would stimulate the growth of the aircargo industry and provide a ready reserve for use in a military emergency.

Secretary of the Air Force James Douglas reportedly blocked the loan-guarantee proposal at a White House inter-departmental meeting on August 17. The Secretary was said by trade sources to have demanded new cargo planes for MATS as his price for agreement. Congress refused the Air Force funds for 10 jets earlier this year.

Two Senators Critical

Renewed congressional criticism of MATS came from two Democratic Senators, A. S. Mike Monroney, of Oklahoma and Stuart Symington, of Missouri. Both are considered authorities on the subject.

Senator Monroney has studied MATS over the last 2 years as chairman of a special subcommittee of the Interstate and Foreign Commerce Committee. Senator Symington is a former Secretary of the Air Force.

Both men, in Senate speeches, indicated they believed that MATS was carrying on its extensive airline-type of operation to the detriment of its mission of airlifting military forces in time of national emergency.

"The simple fact is," Mr. Symington said, "that MATS cannot be both a commercial-type airline, with 480 stewardesses, and a combat airlift force constantly on the alert, comparable to the Strategic Air Command.

"It is important to note," he went on, "that the Army and the Marine Corps can only obtain adequate airlift through the Air Force; and while the Air Force continues to build up its airline operations, it also continues to refuse to give the Army that lift impartial experts believe is essential if we are to handle a possible limited war."

CONFLICT IS CITED

Senator Monroney said there was a "growing conviction" in Congress and the Defense Department "that the peacetime airline operation of MATS is in direct conflict with its primary responsibility in an emergency."

He argued that the MATS strategic transport fleet was, at any given time, scattered all over the world delivering routine military supplies, and was kept busy at a high utilization rate.

"Not only must its planes be recalled and necessary maintenance performed before MATS could conduct any large-scale movement of troops, but some arrangements must be made on a crash basis for commercial aircraft to take over routine air logistics on which oversea units depend," Senator Monroney added.

If, instead, MATS relied on commercial carriers for routine oversea supplies, it could keep its fleet always ready for emergencies abroad, he declared.

The Oklahoma Senator ridiculed a MATS contention that he called the "anyhow theory." This referred to statements by MATS officials that it was economical to utilize MATS planes for military traffic since "the planes are going anyhow" for training purposes.

PROFICIENCY HOURS NOTED

Senator Monroney said Brig. Gen. Albert T. Wilson, MATS Deputy Chief of Staff, had acknowledged to his Subcommittee on Military Air Transportation that only 15 percent of MATS flying hours were actually required for the agency's qualification and proficiency-training program.

"The number of hours flown by other units, with missions no less demanding," Senator Monroney told the Senate, "confirms the accuracy of this estimate."

He said MATS needed to be reequipped with "substantial numbers" of a specialized "workhorse" aircraft capable of carrying at least 50,000 pounds of troops and equipment over an intercontinental range.

They should also be able to operate in and out of primitive fields and short runways without the need for elaborate ground-handling equipment, he said. He indicated he thought the same type of plane should be produced for civil use.

"No plan to reequip MATS in these terms has been submitted to the Congress," he said.

He declared that the usefulness for hard-core missions of converted jet transports recently requested by the Air Force was "dubious," while their "usefulness for de luxe passenger service is unquestioned."

He invited the Defense Department to present a comprehensive plan for a modern military transport program and give evidence of its intention to "get MATS out of the airline business." He said he was confident of strong congressional support for such moves.

MODERNIZATION IS URGED

Meanwhile, MATS has been making its own case for fleet modernization. Maj. Gen. Raymond J. Reeves, deputy MATS commander, told an American Legion meeting in Minneapolis that "the weakest link in our national security system may well be our strategic military airlift unless we take the trouble now to remedy its deficiencies."

General Reeves said three types of planes were needed—a high-speed turbine aircraft to support jet bombers wherever they go; a general "workhorse" plane to replace the piston-engine Douglas C–24 Globemasters, and additional Douglas C–133 Cargomaster turboprops, a plane that is now in inventory in limited numbers.

Cutting MATS flying hours to less than the present five a day would hinder its ability to respond in a war emergency, General Reeves said.

"Our maintenance and supply, our own logistic support, once geared below 5 hours, simply cannot accelerate in time, any more than an idle factory can come to peak production overnight," he asserted.

Senator Monroney had contended that missions that MATS had to perform because of the size, nature, or destination of the cargo would provide MATS with enough flying hours to maintain proficiency.

[Aviation Daily, Aug. 19, 1959]

PAN AM'S SUPER HERCULES ORDER HINGES ON DEVELOPMENT CONTRACT

Pan American's order for 12 Lockheed Super Hercules is subject to cancellation if Lockheed is unable to obtain at least a $15 million development contract from the U.S. Government by the end of next month, the Daily has learned.

Lockheed has agreed to take up to 22 of Pan American's Boeing Stratocruisers in trade. The first 12 would be valued at $310,000 each, with the others $300,000 and lower.

The Air Force is asking Congress for a supplemental appropriation of $30 million to modernize the MATS fleet. As the bill is now written—it has passed the Senate and is in conference committee—some of the money could be used for development of the all-cargo turboprop.

Price of the first 12 Super Hercules is a firm $3,950,000 each. Pan American also has optioned an additional 12 planes and has obtained a most-favored-customer clause which could result in a lower cost per plane if Lockheed sells to anyone else at less than the presently agreed-upon price.

Lockheed has the option of canceling not only if Air Force money is not forthcoming, but also if it is unable to obtain engines in time to meet the 1962 delivery schedule.

Under the terms of the contract, Pan American has agreed to pay a 5-percent cash downpayment and four more 5 percent progress payments. Unpaid balance, after credit for the trade-ins, is payable on delivery of the aircraft. To raise the necessary cash for this, as well as other equipment purchase commitments, Pan American has arranged to sell $47 million in 4¾ percent convertible debentures.

Key paragraph of the Super Hercules contract provides that either party may terminate by September 30, 1959, "If Lockheed has not entered into a development contract with the U.S. Government with respect to model GL–207 type aircraft." By letter this has been amended to define the words "developmental contract" to mean "not less than a $15 million phase in developmental contract."

USAF SECRETARY LONE HOLDOUT ON CARGO PROJECT

Air Force Secretary James Douglas refused to budge from his stand against guaranteed loans for all-cargo aircraft at an interdepartmental meeting Monday in the White House.

White House Presidential aid Gerald Morgan presided at the meeting which included Douglas, CAB Chairman James R. Durfee, Commerce Secretary Frederick H. Mueller, and FAA Administrator Elwood R. Quesada.

Douglas is the lone holdout among all Government departments and top personnel against the legislative program drafted by Senator A. S. Mike Monroney (Democrat, Oklahoma) and Quesada which is designed to give impetus to the development of new and efficient all-cargo aircraft.

It is understood that the Air staff agreed to the program but was overridden by Douglas. All other DOD units are lined up in favor of it.

The Secretary's stand is 100 percent in favor of continuing MATS as a passenger-carrying airline competing strongly with commercial carriers domestically and overseas. It is understood that Douglas would probably endorse the all-cargo legislation if MATS is able to get funds for purchase of long-range jets.

Douglas has been adamant on this issue despite a showing that during the past year MATS has not transported a solitary military unit as large as a battalion, except for carrying only personnel and hand baggage for a battalion.

The 3-hour meeting at the White House was said to have been quite spirited, highlighted by vigorous pleas for the programs by Quesada and Douglas' lone holdout for new equipment for MATS as a price for going along with a program designed to provide new business for both manufacturers and commercial carriers.

According to informed sources Quesada has by no means given up his fight, although all chance for legislative action at the current session has passed.

Following the meeting Douglas told the Daily: "The Air Force and the Department of Defense are favorable to the encouragement of the development of aircargo planes which could be used for defense and for commercial operations. They are also favorable in principle to the use of guaranteed-loan agreements. The concern of the Air Force, which is shared by the Defense Department, is with any implication that when such aircraft are developed, MATS could stop replacing obsolete equipment or that civil carriers could do the whole job."

Douglas said the size of MATS is a "tough judgment" question but that MATS must be maintained. He said the 1960 fiscal year shows a 10-percent reduction over 1959 in requirements. He added that the whole reduction has been programed against military operations.

Douglas also said he believed that more Government cargo and personnel ought to go by air, which would leave a basic capability for MATS and also encourage the civil carriers. He said there is no reason to increase the size of the MATS fleet in peacetime and predicted that the number of planes in the MATS fleet would be reduced in the years immediately ahead.

His concern with the proposed legislation is, however, that strings not be attached which would foreclose MATS plane replacement or would bar at any time in the future necessary MATS operations. He pointed out that the Air Force has always encouraged the development of usable cargo aircraft, citing the development funded by the Air Force of the T61 and T64 engines.

FIRST-CLASS MAIL-BY-AIR BILL ACTION DELAYED

Action by the Senate Post Office Committee and the Senate subcommitee handling legislation to permit greater use of air carriers to move mail stalled yesterday as neither the committee nor the subcommittee could muster a quorum. Subcommittee Chairman A. S. Mike Monroney, Democrat of Oklahoma, said he would try again later in the week. The measure (S. 2402) would allow the Postmaster General to expand the first-class mail-by-air program.

FAA TO ABSORB AIR FORCE AIRCRAFT CONTROL MISSION

By 1964 FAA will be in almost complete control of the Air Force aircraft control mission, FAA sources have said. Armed Forces Management magazine says FAA is well into the planning stages of Project Friendship, which will tentatively begin a phasein of FAA personnel to worldwide Air Force bases in 1961.

The program will mean that about twice the number of controllers would be employed by the ———— freeing some 12,500 military personnel for more critical military missions.

[Aviation Daily, Aug. 26, 1959]

DURFEE NOMINATED TO COURT OF CLAIMS

The White House sent to Congress late yesterday President Eisenhower's nomination of CAB Chairman James R. Durfee to the U.S. Court of Claims. The appointment is subject to routine confirmation by the Senate Judiciary Committee and the full Senate, a process which conceivably could become snarled in any sudden Capitol Hill adjournment drive. But a White House spokesman said any such complication could be solved with a recess appointment seating him on the court until Congress returned in January. He said Durfee's resignation from the Board probably would become effective with his confirmation or with a recess appointment. The long-expected appointment fills a vacancy caused by the retirement of Judge Benjamin H. Littleton last October. The Court of Claims is on vacation until October 1.

QUESADA TO PRESENT DC–8 TYPE CERTIFICATE MONDAY

Douglas Aircraft Co., chopping a full month off its original schedule, receives the type certificate for the DC–8 at ceremonies at Baltimore's Friendship Airport Monday. FAA Administrator E. R. Quesada will make the presentation to Donald W. Douglas, Sr., at a luncheon following two brief demonstration flights of the big new jet. The certificate specifically will cover the "domestic" DC–8 model which will be powered by the Pratt & Whitney JT3C–6 engine. Subsequent models, all bearing the same DC–8 designation, will incorporate the JT4A–3 and the Rolls-Royce Conway engines for U.S.- and foreign-flag operations on international routes. United and Delta Air Lines, which already are making crew training flights with their first DC–8's, will put the aircraft into scheduled service September 18.

MONRONEY HITS AIR FORCE BLOCK OF ALL-CARGO PROPOSAL

Senator A. S. Mike Monroney, Democrat of Oklahoma, yesterday criticized the Air Force and MATS for standing in the way of legislation to promote development of all-cargo aircraft.

He said in a speech on the Senate floor that the cargo plane proposal was to have been part of a larger plan to cope with deficiencies in emergency airlift. He emphasized that the program was not "imposed on the Department of Defense." He said it had been "officially, recently, and repeatedly endorsed" by DOD. He said Assistant Defense Secretary Perkins McGuire agreed with proposal which calls for (1) routine logistic functions of MATS to be transferred to the civil carriers, to the extent of their present capacity to perform; (2) a comprehensive program to encourage civil carriers to procure modern cargo aircraft; and (3) to modernize MATS in terms of its primary "hard core" military mission. "We fully support the measures you proposed," McGuire told Monroney in the letter.

Monroney said these statements led to a "burst of optimism" among lawmakers and industry heads.

"An analysis of current capacity of civil carriers was undertaken, and its results reported to the Appropriations Committee, with the recommendation that increased funds be earmarked for procurement of air transportation from civil carriers. Within CAB and FAA work was accelerated on a bill to facilitate procurement of modern cargo aircraft. Several carriers ordered new aircraft. One carrier, since joined by others, submitted to DOD a comprehensive plan for peacetime and wartime air transportation and three of these carriers filed tariffs substantially below MATS' own costs and average contract rates. Conferences were held with several manufacturers on possible design for modern cargo and troop-carrying aircraft which might be suitable for both military and civil use. * * *"

But, Monroney said, the Air Force actually proposed a decrease in the funds earmarked for procurement of commercial airlift "and conducted as vigorous a lobbying campaign as I can recall on a particular appropriation item."

He charged that Air Force Secretary James Douglas has stalled the bill to facilitate the purchase of cargo aircraft by civil carriers.

Monroney said he is not "antagonistic to MATS." But he said he believes that "the peacetime airline operations of MATS are in direct conflict with its ability to discharge its primary responsibility in an emergency."

AIRMAIL BILL APPROVED BY COMMITTEE

The Senate Post Office Committee yesterday approved legislation giving the Postmaster General limited authority to enter into mail contracts with airlines. Committee approved an amendment version of Senator A. S. Mike Monroney's bill (S. 2402) by a vote of 5 to 4.

Senators struck a provision authorizing the Postmaster General to use air transport for any class of mail where surface means are impracticable. Action was based on the argument that he already has this authority as demonstrated in a court case on the airmail experiment.

Bill provides: (1) That contracts shall be filed with CAB 30 days before becoming effective. (2) That CAB shall be able to suspend contracts for a maximum of 90 days if rates are found unfair or unreasonable. (3) No contracts suspended shall become effective if the Board finds the rate of compensation "unreasonable." (4) Board would be allowed to amend the rules regarding contracts as it deems fit.

Spokesmen said the bill would not require advertising of bids for mail contracts under specified circumstances. The rate of compensation for PO contracts with any air carrier would be available to all other qualified carriers under the bill's terms, they said.

FAA SEEKS FUNDS TO OPERATE NAVAIDS

FAA is asking Congress to approve an 11th-hour $17-million transfer within its fiscal year 1960 budget to man new air navigation facilities which "otherwise would stand idle."

In an unusual bid which would attempt to counteract the effects of a regular appropriations bill before the bill itself has cleared Congress, FAA urged the Senate Appropriations Committee Tuesday to sanction the transfer from its air navigation facilities category to its operating expenses.

The request went to Capitol Hill Monday in an fiscal year 1960 "supplemental" appropriations bill totaling $19,349,000 for a number of agencies. With the first fiscal year 1960 supplemental and FAA's regular 1960 budget bills still in confer-

ence, this latest spending bill probably will be tacked onto the mutual security appropriations measure, last spending bill of the session, as a rider.

FAA Administrator E. R. Quesada told the Senate committee bluntly that under the $2-million budget cut imposed by the Senate-House conference on the regular FAA appropriations measure, FAA was coming back to Congress with the transfer request, rather than flirt with "intimidation" by leaving unmanned 298 navaid facilities and blaming Congress for not funding them.

AIR FORCE LOBBYING HIT BY MONRONEY

In his Senate speech on August 25, singling out the Air Force as the one holdout to a congressional-Government program to develop a private aircargo industry, Senator A. S. Mike Monroney, Democrat, of Oklahoma, had some unusually bristling things to say about USAF lobbying on Capitol Hill.

In his final plea to take MATS out of the airline business and put it to work on military projects, Monroney said:

"In closing, let me say a word of personal thanks and encouragement to all those in the Air Force, the Department of Defense, the civilian agencies of the Government, and the aviation industry, who know these things to be true, and have fought to hurry the changes which must come.

"You have been threatened, insulted, frustrated, and vilified because you have defined that most precious altar—the military status quo. But you labor in the Nation's interest; and, because of your efforts, someday the word 'military' in the name 'Military Air Transport Service' will no longer describe an airline's customers, but will again mean of and pertaining to soldiers, arms, or war."

FAA WILL NOT REQUIRE HIGH-VISIBILITY PAINT

FAA is abandoning plans to require civil aviation to use the "flaming orange" high-visibility paint which marks all its own aircraft and is widely used by the military to help prevent midair collisions.

Rulemaking begun last November by CAB is being dropped because tests showed high costs of applying and maintaining the special paint, coupled with its apparent adverse effect on the life of fabric surfaces, "would impose burdens on the public not warranted by the probable gain in safety," FAA said Thursday. It said the proposal drew a majority of opposing comments.

FAA found "general agreement" that an aircraft is more conspicuous if it carries flaming orange markings, but "conflicting views" on whether it would attract the attention of another pilot sufficiently to make it an effective anticollision measure. And its high visibility characteristics deteriorated unevenly, depending on time and weather, adding to cost and maintenance problems, FAA said.

The Agency will continue to use the special paint on its 100-odd aircraft, and plans to continue research on it. It also is searching for the exact cause of the paint's adverse effect on fabric surfaces, a phenomenon which FAA said is "not yet completely understood."

But it clearly was the unreasonable cost and maintenance factors which killed the rulemaking. As one FAA spokesman put it: "If it didn't have all these drawbacks, we'd probably go ahead and say, 'Paint 'em.' "

DEADLINE EXTENDED FOR AIRPORT AID REQUESTS

FAA has extended the deadline for fiscal year 1961 applications for Federal airport aid from September 1 to November 30. But it is not altering its January 1961 target date for announcement of the approved fiscal year 1961 program. It also is making no change in the September 1 deadline and November 1 announcement date for the fiscal year 1960 aid program. The original deadline for 1961 applications, just 2 months after President Eisenhower signed the 2-year extension, proved unrealistic. Project sponsors already filed for 1961 may let their proposals stand, or amend them before November 30.

MATS should be modernized but its equipment should not be used in competition with scheduled air carriers, the American Legion declared in a resolution adopted at its annual meeting in Minneapolis Wednesday.

[The Washington Post, Aug. 20, 1959]

Disagreement Bars Buildup of Vital Aircargo Industry

(By John G. Norris, staff reporter)

Disagreement between the Air Force, Federal Aviation Agency, and the airlines has blocked plans to build up the Nation's badly lagging aircargo industry and modernize its nearly obsolete military airlift.

A Senate-House conference committee report presented yesterday denied all funds for development of an advanced type new cargo plane and a new engine to power it. The report said it was deferring a $30-million request for the project, because of the disagreement, pending further study of the issues involved.

The report said that FAA Administrator Elwood (Pete) Quesada had said that the Air Force's $30 million proposal should be denied, and declared that Quesada "intimates that the Military Air Transport Service (MATS) should be on its way out."

RAPS ATA

It also rapped the Air Transport Association for opposing anything that would modernize MATS.

At the same time, aviation circles reported that Air Force Secretary James H. Douglas had opposed a Quesada plan to foster the creation of a modern and live American aircargo industry by means of Government-guaranteed loans for construction of advanced type cargo planes.

American Aviation Daily reported that Douglas was the "lone holdout" against the plan at a White House meeting Monday of top Government officials aimed at reconciling the widely separated views within the administration.

DOUGLAS DENIES IT

Douglas denies this, saying the Air Force or the Defense Department "favor in principle" some form of guaranteed loan plan and support moves to develop new air cargo planes for both military and commercial use. But he expresses "concern" with the view that once commercial airlines have a fleet of such modern craft they could "do the job" of the Military Air Transport Service.

This dispute—and some wheels within wheels in the airline industry in which some big companies oppose the guaranteed loan plan and smaller companies support it—thus has killed any chance of remedial action in this field at least until next year.

As of today, the United States is fourth in the world in the important air cargo field behind Canada, Russia, and Britain.

Lacking any modern, American cargo plane in being or in prospect that can compete with other means of transport or with foreign nations, two U.S. airlines recently have placed orders for new equipment in Canada.

SIMILAR PLAN IN CANADA

Canada, using a guaranteed loan plan somewhat similar to that proposed by the FAA, has an efficient new turbo-prop cargo plane known as the CL–44. The Flying Tigers and Seaboard and Western airlines, both leaders in the U.S. air freight industry, have contracted for 15 CL–44's. Two other American airlines Riddle and Argosy, have placed orders for a new British cargo plane.

Pan American and Slick Airlines have contracted with Lockheed for construction of 18 of that American plane builder's proposed Super-Hercules, a craft that could compete with the Canadian and British cargo aircraft. But Lockheed is not bound to fulfill its contract if the Government does subsidize the development of a new Allison turbo-prop engine to power it. The $30 million just denied by Congress was aimed at such development.

Meanwhile, the Nation's military airlift grows more obsolescent each year as the Defense Department budget squeeze allows only minimal funds for new Air Force cargo planes and airline opposition blocks much of what little the Pentagon proposes for modernization of MATS.

650 PLANES

MATS now has some 650 planes, in all, very few of them modern turboprop craft. Of its "strategic" or long-range force, there are only 17 C–133's, a large

military type for hauling missiles and other big loads overseas. More than half are the aging C–124 Globemasters.

In the overall fleet there are a growing number of C–130 turboprop medium range cargo planes, but also many slow and aging C–54's and other World War II or earlier types. The more modern of them are military versions of American airliners largely suitable for carrying individual passengers, miscellaneous freight or troops without equipment.

AGREE ON MODERNIZATION

While there is dispute within the Pentagon as to the adequacy of the present level of airlift—with the Army demanding more and the other services disagreeing—all agree that what there is requires modernization.

Defense chiefs who defend the present level of airlift often cite the Civil Reserve Air Fleet as an important supporting unit. But Senator A. S. (Mike) Monroney, Democrat of Oklahoma, chairman of the aviation subcommittee of the Senate Interstate and Foreign Commerce Committee, calls CRAF a complete and total failure. He points to the rather startling fact that only one airline—TWA—has signed a contract to make its planes available in an emergency. Undoubtedly the others would come through in a major war but the worth of CRAF in a limited war emergency seems nil.

Moreover, only 7 percent of the American commercial airline fleet are cargo craft, while the military need is 80 percent cargo and 20 percent passenger.

COULD TAKE OVER

The solution to the airlift problem urged by Monroney and Quesada is to build air cargo industry under a guaranteed loan plan. Under the plan, planes so financed by airlines would be immediately available for military use in any emergency as a condition of the Government guaranteeing a private bank loan to the transport company. Monroney declares that if airfreight operating costs can be brought down from the present 22 cents or more per ton mile to 4 or 5 cents, airlines will start carrying "cabbages instead of diamonds" and a big American cargo industry will result.

This industry could take over much of the present MATS traffic of hauling military men, their families and ordinary freight to overseas points, it is argued.

Quesada, a former Air Force general, said yesterday that he believed MATS had a legitimate role in carrying outsize cargo that commercial planes cannot take and providing a hard core lift for military cargo and military troop units. But the civil airlines, he said, should move conventional military freight and military people other than combat units.

The Air Force view is that MATS must be maintained at something like its present level—perhaps reduced a bit—to maintain an always ready, military-operated airlift that can go anywhere under war conditions at any time.

If commercial carriers took over much of the present peacetime military air hauling, the Air Force fears that the pinched Pentagon budget couldn't stand the cost of paying fares for most of its air passengers and cargo, and also maintaining a partially idle troop carrier lift.

Senate-House conferees on the supplemental appropriations bill appeared to agree with the Air Force stand yesterday. They said that failure to maintain MATS as a working unit would be like not maintaining guns, planes, or ammunitions.

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D.C., September 17, 1959.

Hon. FRANK J. BECKER,
House of Representatives.

DEAR MR. BECKER: This is to acknowledge your letter to the Secretary of Defense, dated September 8, 1959, which referenced your letter of August 5, 1959, and our reply of August 31 concerning implementation of civil air policy.

Your letters and our prior response are being analyzed for the purpose of determining the additional data which is required to be responsive to your questions. The information developed as the result of this analysis will be forwarded to you as soon as possible.

Sincerely yours,

PHILIP LEBOUTILLIER, JR.

ASSISTANT SECRETARY OF DEFENSE,
SUPPLY AND LOGISTICS,
Washington, D.C., October 21, 1959.

Hon. FRANK J. BECKER,
House of Representatives.

DEAR MR. BECKER: This is in reply to your September 8, 1959 letter relative to Department of Defense implementation of civil air policy, and further to our August 31 reply to the three questions of your August 5 letter. It is regretted that our reply did not furnish you with the information you desired.

With respect to your first question concerning the MATS study, it is true that the President requested the study more than a year ago, specifically in July of 1958. It is not true, however, that it is being held up because of any change of minds in the field of basic policy. The problem of the proper role of and mission of MATS in peace and war is complicated by serious quantitative and qualitative deficiencies in civil air cargo capability. We are securing counsel of many qualified persons, including that of industry, in order to arrive at a proper solution. At this point, the exact forwarding date to the White House has not been established. We are striving for an early one.

In reference to your second question, newspaper articles, such as the ones you referred to, cannot possibly have the grasp of the numerous factors involved and the time required to resolve them properly. You asked if the newspaper article attached to your letter of August 5 is true. Secretary Douglas has not changed any previously expressed position and in no way opposes Defense Department policy in the matter. In addition, rumors have been printed to the effect that Secretary Douglas has opposed the development of a modern air cargo fleet; these rumors too are untrue. Secretary Douglas is concerned though that MATS, as well as the civil air fleet, be modernized.

As to your third question, a definite decision has not been made on the plan for common carriage of Defense cargo submitted by Seaboard and Western Airlines. Its acceptance would involve certain policy changes we are not prepared to make at this time, but which may be indicated on the completion of our study of MATS. We hope to furnish a definite answer at an early date.

The practices of the Department of Defense in using commercial air service are not inconsistent with the Civil Air Policy recommended by the Air Coordinating Committee. We depend primarily upon common carriage domestically and our use of it internationally is increasing. While use of commercial air service may not have reached the ultimate overall beneficial limit, the record shows increasing use of civil air carrier services with decreasing military carriage despite lack of modern air cargo capability.

In our efforts to be responsive to your questions, we may have given rise to further questions, or you may desire to discuss these matters in more detail. If so, we shall be glad to arrange a meeting with you.

Please let us know if we can be of further service to you.

Sincerely yours,

PHILIP LEBOUTILLIER, Jr.

EXHIBIT NO. 1

EXHIBIT ACCOMPANYING TESTIMONY OF JAMES M. SYMES, PRESIDENT, THE PENNSYLVANIA RAILROAD COMPANY

PHILADELPHIA, PA., *July 29, 1959.*

Subject: House Committee on Armed Services, Sub-committee on Transportation, Hearings on Adequacy of Transportation in the Event of Mobilization, July, 1959. Exhibit of Mr. James M. Symes, President, The Pennsylvania Railroad.

MEMORANDUM OF EXHIBIT ERRATA

1. Where " 'Statistics of Railways in the United States', Interstate Commerce Commission" is shown as the Source, the 1958 figures were furnished by the Association of American Railroads from abstracts of reports by railroads to the Interstate Commerce Commission and Association of American Railroads.
2. Page 14, column 4, for the year 1958 substitute "742,400" for "761,745". Footnote (a) should read "Includes material and supplies, and cash".
3. Page 38, column 6, for the year 1943 substitute "42,440" for "42,400" and for the year 1944 substitute "43,408" for "43,208".
4. Page 39, footnote (b) last word substitute "originated" for "carried".
5. Page 109, column 4, for the year 1943 substitute "2.48" for "2.84".
6. Page 118, column 15, fourth item, substitute "77.3" for "80.8".
7. Page 121, column 1, line A–1 substitute "Book Net Assets" for "Book Net Amount".

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Frontispiece. **Map of territory served by the Pennsylvania Railroad. (Too large for readable reproduction in page size. Copy on file in committee office.)**

PENNSYLVANIA RAILROAD

COMPARISON OF PENNSYLVANIA RAILROAD WITH CLASS I RAILROADS

YEAR 1958

Item (1)	Class I (2)	Pennsylvania Railroad (3)	P.R.R. Percent of Total (4)
1. Miles of Road Operated (December 31)	208,600(a)	9,917(b)	4.75
2. Miles of All Tracks Operated (December 31)	345,359(a)	23,555(b)	6.82
3. Average Number of All Employes	840,575	80,727	9.60
4. Compensation	$4,929,906,000	$473,800,329	9.62
5. Number of Locomotive Units in Service (December 31)	29,560	2,692	9.10
a. Aggregate Tractive Effort (Pounds)	1,811,396,000	164,812,000	9.10
6. Number of Freight Carrying Cars (December 31)	1,724,213	171,470	9.94
a. Aggregate Capacity (Tons)	94,486,434	10,186,721	10.78
7. Number of Passenger Carrying Cars (December 31)	18,577(c)	2,036	10.96
a. Total Capacity (Passengers)	1,226,082(c)	122,832	10.02
8. Revenue Passengers Carried	380,334,985	53,612,015	14.10
9. Revenue Passenger Miles	23,271,149,000	2,928,127,000	12.58
10. Revenue Tons Carried	1,190,300,000	154,255,000	12.96
11. Revenue Ton-Miles	551,667,857,000	41,484,758,000	7.52
12. Total Operating Revenue	$9,564,100,000	$844,232,093	8.83
13. Net Railway Operating Income	$762,300,000	$11,738,000	1.54
14. Total Net Investment	$27,500,000,000	$2,378,000,000	8.65
15. Total Funded Debt Outstanding(d)	$10,122,000,000	$934,200,000	9.23

(a) Excludes trackage rights to avoid duplication.
(b) Includes trackage rights.
(c) Includes Pullman Company cars.
(d) As of December 31, 1957. Class I 1958 data not available. PRR funded debt outstanding as of December 31, 1958 - $912,600,000.

Research Department - PRR
July 27, 1959

EMPLOYMENT IN TRANSPORTATION

COMPARED WITH

TOTAL U. S. EMPLOYMENT

APRIL 1959
(Thousands)

Item (1)			Totals: Group (2)	Totals: Cumulative (3)	Percent of: U. S. Population (4)	Percent of: Employed Labor Force (5)
I	United States Population		176,446.0		100.0	
II	Total Civilian Labor Force		68,639.0		38.9	
III	Employed Civilian Labor Force		65,012.0		36.8	100.0
IV	Transportation and Allied Industries					
	A. Transportation					
	1. Transportation Industry					
	a. Interstate railroads	945.0				1.5
	b. Local railway and bus lines	92.2				
	c. Trucking and warehousing	828.3				
	d. Bus lines, except local	39.5				
	e. Air (Common Carriers)	142.6				
	f. Pipelines	24.9				
	g. Other transportation and services	471.1				
	h. Total		2,543.6		1.4	3.9
	2. Truck Drivers not included elsewhere - estimated		5,000.0			
	3. Total		7,543.6	7,543.6	4.3	11.6
	B. Allied Industries					
	1. Transportation Equipment					
	a. Motor vehicles and equipment	746.3				
	b. Aircraft and parts 750.2					
	less employed on military aircraft (estimated) 400.0	350.2				
	c. Ship and boat building and repair	149.7				
	d. Railway equipment	51.4				
	e. Tires and tubes	93.0				
	f. Other	9.9				
	g. Total		1,400.5	8,944.1	5.1	13.8
	2. Contract Construction					
	a. Highway and street construction		252.7	9,126.8	5.2	14.0
	3. Wholesale Trade					
	a. Automotive		131.5	9,328.3	5.3	14.3
	4. Retail Trade					
	a. Automotive and accessories dealers		789.9			
	C. Total Transportation and Allied Industries			10,118.2	5.7	15.6

Source: Line I, II, and III - Bureau of Census, U. S. Department of Commerce. Line I includes Armed Forces Overseas and Alaska, separate data for which is not available.
Line IV - A-2 - American Trucking Association estimates a total of 6,440,000 truck drivers in U. S., excluding farmers.
Other - "Employment and Earnings", June 1959, U. S. Department of Labor.

GROSS INVESTMENT IN DIRECT TRANSPORTATION

COMPARED WITH PUBLIC DEBT

(Latest available data - Dates shown in Source)

Item (1)	Amount (Millions) Private (2)	Government (3)	Total (4)	Percent of Total Investment (5)	Percent of Public Debt Federal (6)	Percent of Public Debt Total (7)
I Gross Investment in Direct Transportation						
A. Rail						
1. Rail Carriers	$ 36,300					
2. Private Car Lines	1,400					
3. Total	$ 37,700	None	$ 37,700	13.2	13.2	10.9
B. Air						
1. Domestic Scheduled Carriers	$ 1,800					
2. General Aviation Airplanes	570					
3. Total	2,370	$ 4,549	6,919	2.4	2.4	2.0
C. Inland Water	2,700	1,646	4,346	1.5	1.5	1.2
D. Highway						
1. Equipment						
a. Trucks	$ 56,000					
b. Buses	2,700					
c. Passenger Cars	114,000					
2. Fixed Facilities						
a. Road	None	63,194				
b. Other	NA	NA				
3. Total	172,700	63,194	235,894	82.9	82.7	68.1
E. Total Gross Investment	$215,470	$69,389	$284,859	100.0	99.9	82.2
II U. S. Public Debt						
A. Federal		$285,100			100.0	
B. State		17,200				
C. Local		44,200				
D. Total			$346,500			100.0

NA - Not available.

Source: Line I-A., Col. 2: Rail: 12/31/58 - Based on I.C.C. total for Class I Railroads of 334,533 ("Transport Economics", May 1959) plus 5% (1957 relationship) for other than Class I Railroads.
Air, Domestic: 6/30/58 - Civil Aeronautics Board
Private : 12/31/57 - Based on 65,000 active planes with average cost of $6,800 each. (Total annual manufacturers net billing price divided by annual shipment of utility aircraft 1947-1957). (Aircraft Industries Association).
Water: 12/31/57 - Investment of Regulated Water Carriers $270 million (Class A and B, "Transport Statistics", I.C.C.). Regulated Carriers are estimated to represent 10% of total regulated and non-regulated carriers.
Highway, Trucks: 1958 - 11.2 million registrations (Automobile Manufacturers Association) with estimated average cost of $5,000 each.
Buses : 1958 - 270,000 registrations (Automobile Manufacturers Association) with estimated cost of $10,000 each.
Automobiles: 1958 - 57 million registrations (Automobile Manufacturers Association) with estimated average cost of $2,000 each.
Col. 3: Association of American Railroads. Does not include state and local expenditure for airports after 1954 and does not include state and local expenditures for waterways, data for which is not available.
Line II: Federal - Bureau of Census, U. S. Department of Commerce - Estimated as of June 30, 1959.
State and Local - Tax Foundation.

Research Department - FRR
July 20, 1959

GROSS INVESTMENT IN DIRECT TRANSPORTATION

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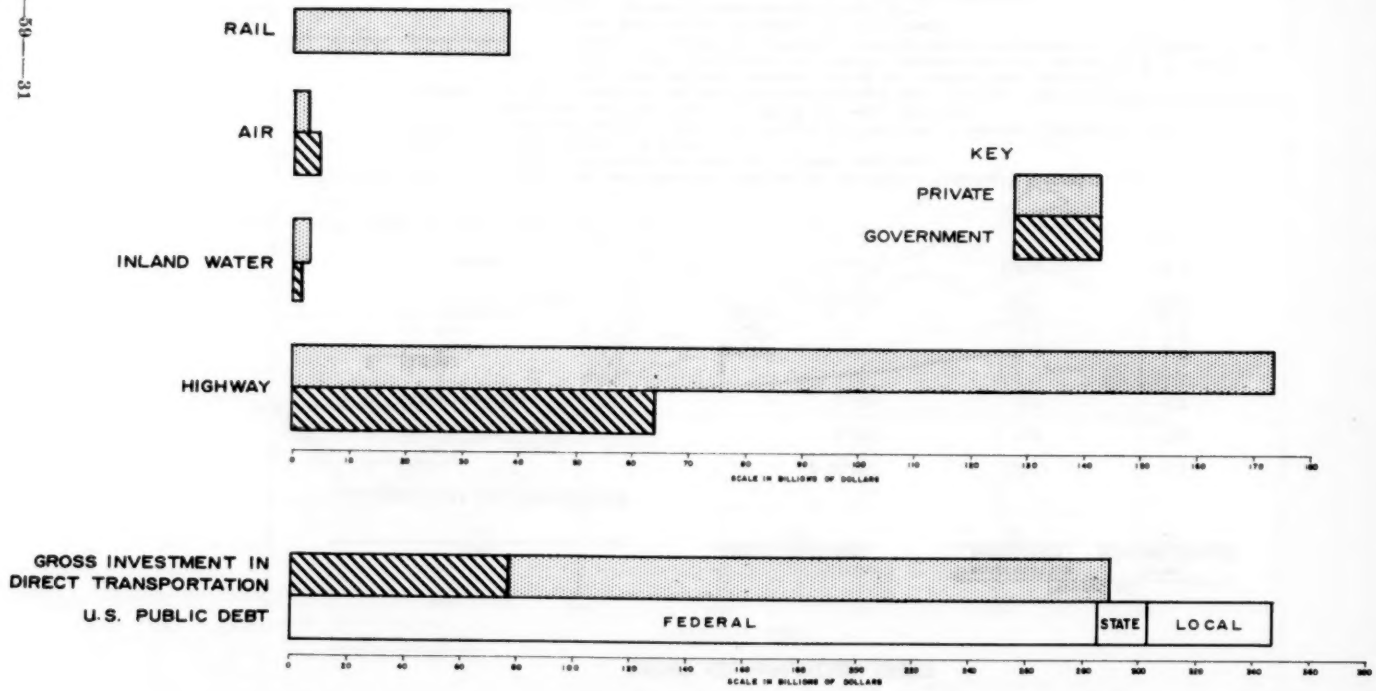
GROSS INVESTMENT IN DIRECT TRANSPORTATION


RAIL
AIR
INLAND WATER
HIGHWAY
KEY
PRIVATE
GOVERNMENT
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
SCALE IN BILLIONS OF DOLLARS
GROSS INVESTMENT IN DIRECT TRANSPORTATION
U.S. PUBLIC DEBT
FEDERAL
STATE
LOCAL
0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360
SCALE IN BILLIONS OF DOLLARS

ANNUAL EXPENDITURES FOR DOMESTIC TRANSPORTATION

COMPARED WITH GROSS NATIONAL PRODUCT

1958

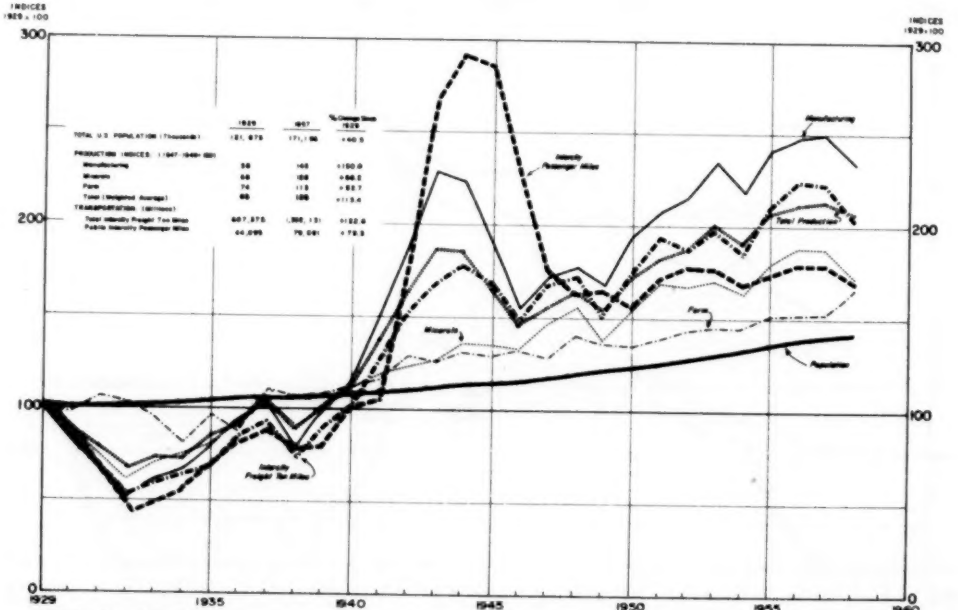
Item (1)	Amount (Millions) (2)	Percent Of: Transportation Expenditure (3)	Percent Of: Gross National Product (4)
I Expenditures for Transportation			
A. Rail	$ 10,000	11.7	2.3
B. Air	1,500	1.8	0.4
C. Inland Waterways	3,100	3.7	0.7
D. Highway	$		
1. Truck	$18,600	21.9	4.2
2. Bus	2,000	2.4	0.5
3. Automobile	49,600	58.5	11.3
4. Total Highway	70,200	82.8	16.0
E. Total Expenditures	$ 84,800	100.0	19.4
II Gross National Product - 1958	$437,700		100.0

Source: Rail - Class I Railway Operating Revenues $9,564 million (Transport Economics, I.C.C.)
Class I Railroads represent 95% of total railroad.
Air - Civil Aeronautics Board
Water - Regulated carriers Operating Revenues $310 million, (Transport Economics, I.C.C.)
Regulated carriers represent 10% of all water carriers.
Highway - Truck: Regulated carriers Operating Revenues $6.2 billion, (American Trucking Association).
Regulated carriers represent 33% of all highway truck carriers.
Bus : Total Operating Revenues for Transit companies for 1957 estimated $1.3 billion (American Transit Association), $300 million for regulated Intercity Buses (I.C.C.) plus $400 million estimated for other buses.
Automobile: Automobile Manufacturers Association
Gross National Product: "Economic Indicators", Joint Economic Committee.

Research Department - PRR
July 19, 1959

TRENDS IN POPULATION, PRODUCTION AND TRANSPORTATION VOLUME

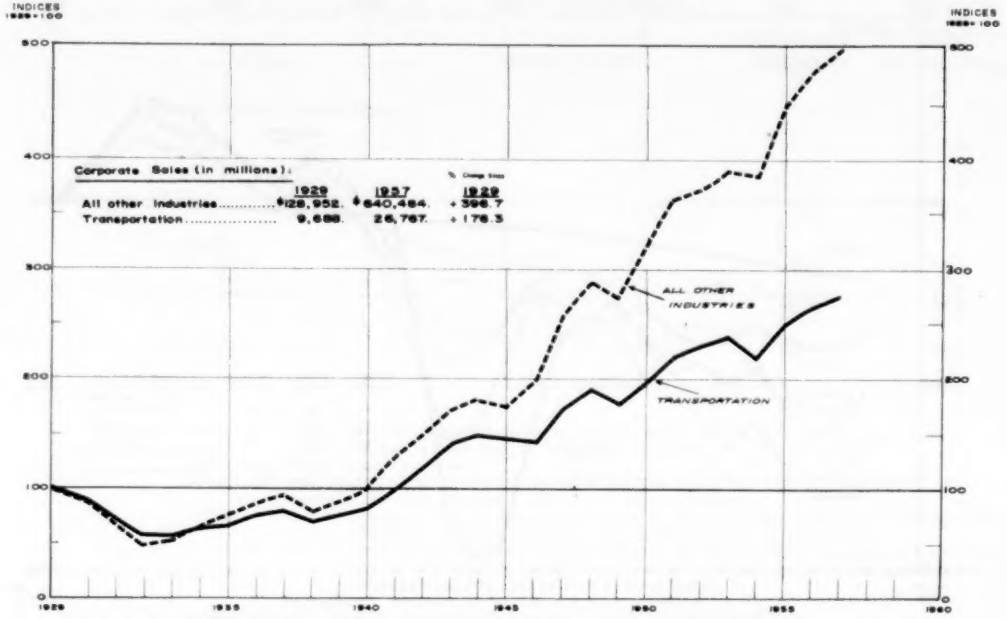
TRENDS IN POPULATION, PRODUCTION AND TRANSPORTATION VOLUME
1929 - 1958



SOURCE: Federal Reserve Board.
U.S. Department of Commerce.
Association American Railroads.
U.S. Department of Agriculture.

FINANCIAL DEPARTMENT, PRR 7-20-59

TRENDS IN CORPORATE SALES, THE TRANSPORTATION INDUSTRY AND ALL OTHER INDUSTRIES, 1929-1957p



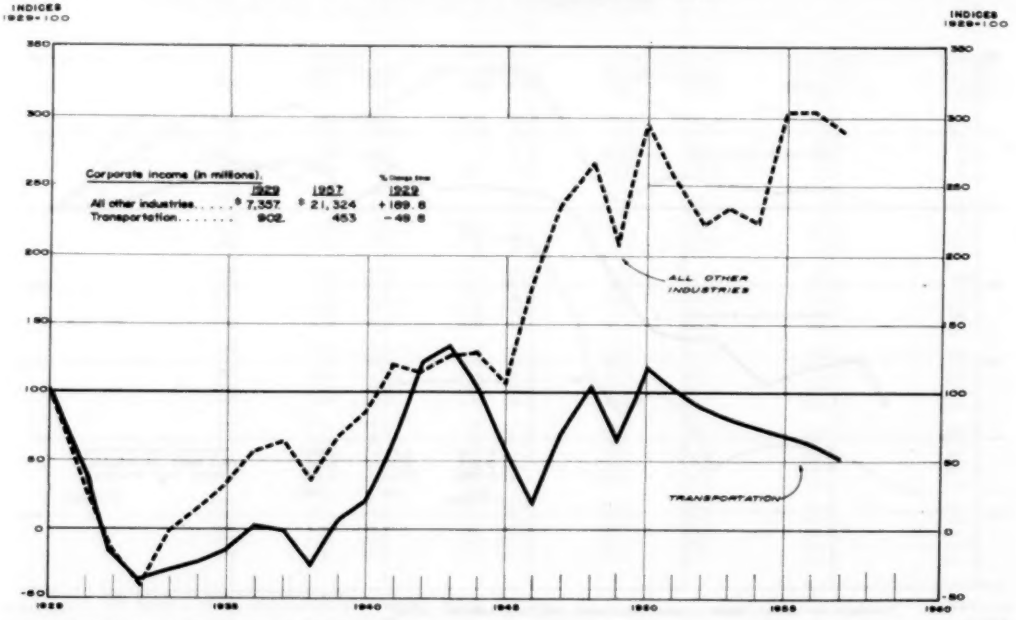
Corporate Sales (in millions):

	1929	1957	% Change from 1929
All other industries	$128,952.	$640,484.	+396.7
Transportation	9,688.	26,767.	+176.3

SOURCE: U.S. Department of Commerce.

FINANCIAL DEPARTMENT, PRR 5-1-59

TRENDS IN CORPORATE PROFIT, AFTER TAXES, THE TRANSPORTATION INDUSTRY AND ALL OTHER INDUSTRIES, 1929–1957



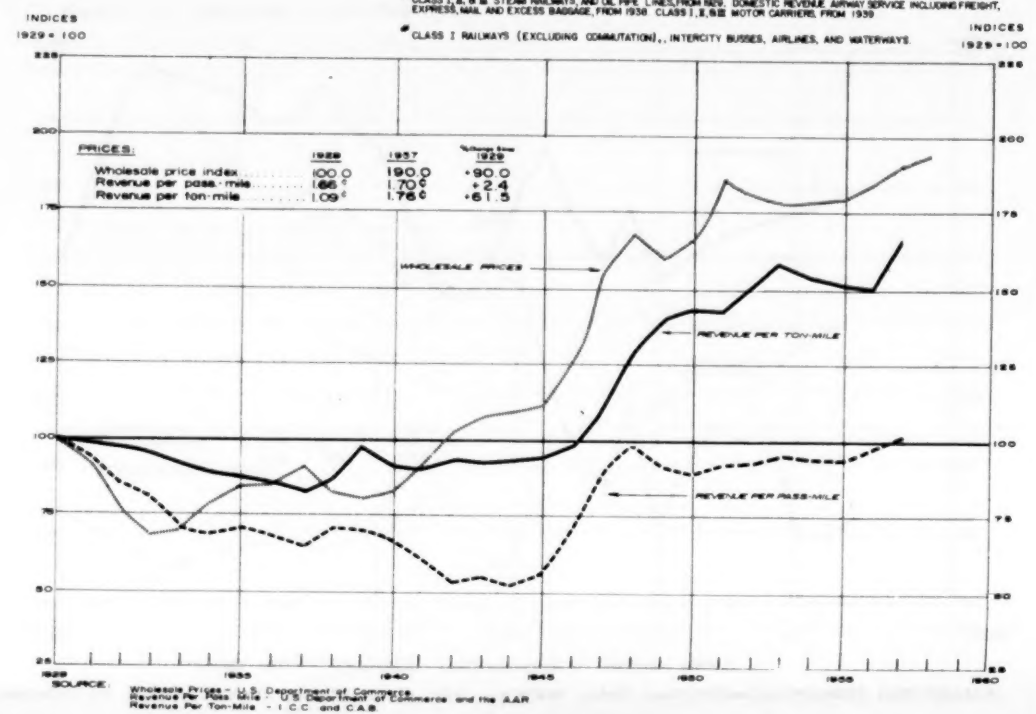
Corporate income (in millions)

	1929	1957	% Change from 1929
All other industries	$ 7,357	$ 21,324	+189.8
Transportation	902	453	-49.8

SOURCE: U.S. Department of Commerce.

FINANCIAL DEPARTMENT, PRR 5-1-59

TRENDS IN WHOLESALE PRICES (ALL COMMODITIES) AND IN TRANSPORTATION REVENUES PER TON-MILE* AND PER PASSENGER-MILE* SINCE 1929


* CLASS I, II, & III STEAM RAILWAYS, AND OIL PIPE LINES, FROM 1929. DOMESTIC REVENUE AIRWAY SERVICE INCLUDING FREIGHT, EXPRESS, MAIL AND EXCESS BAGGAGE, FROM 1938. CLASS I, II, & III MOTOR CARRIERS, FROM 1939
* CLASS I RAILWAYS (EXCLUDING COMMUTATION),, INTERCITY BUSSES, AIRLINES, AND WATERWAYS
INDICES 1929 = 100
INDICES 1929 = 100
PRICES:
1928 1937 Change from 1929
Wholesale price index ..... 100.0 190.0 +90.0
Revenue per pass.-mile ..... 1.66¢ 1.70¢ +2.4
Revenue per ton-mile ..... 1.09¢ 1.76¢ +61.5
WHOLESALE PRICES
REVENUE PER TON-MILE
REVENUE PER PASS-MILE
225
200
175
150
125
100
75
50
25
1929
1935
1940
1945
1950
1955
1960
SOURCE:
Wholesale Prices - U.S. Department of Commerce
Revenue Per Pass Mile - US Department of Commerce and the AAR
Revenue Per Ton-Mile - I.C.C. and C.A.B.

11

FINANCIAL DEPARTMENT, PRR 9-1-58

PENNSYLVANIA RAILROAD

WAGE AND MATERIAL PRICES

COMPARED WITH

PENNSYLVANIA RAILROAD

WAGE AND MATERIAL PRICES

COMPARED WITH

REVENUE PER PASSENGER MILE AND REVENUE PER TON-MILE

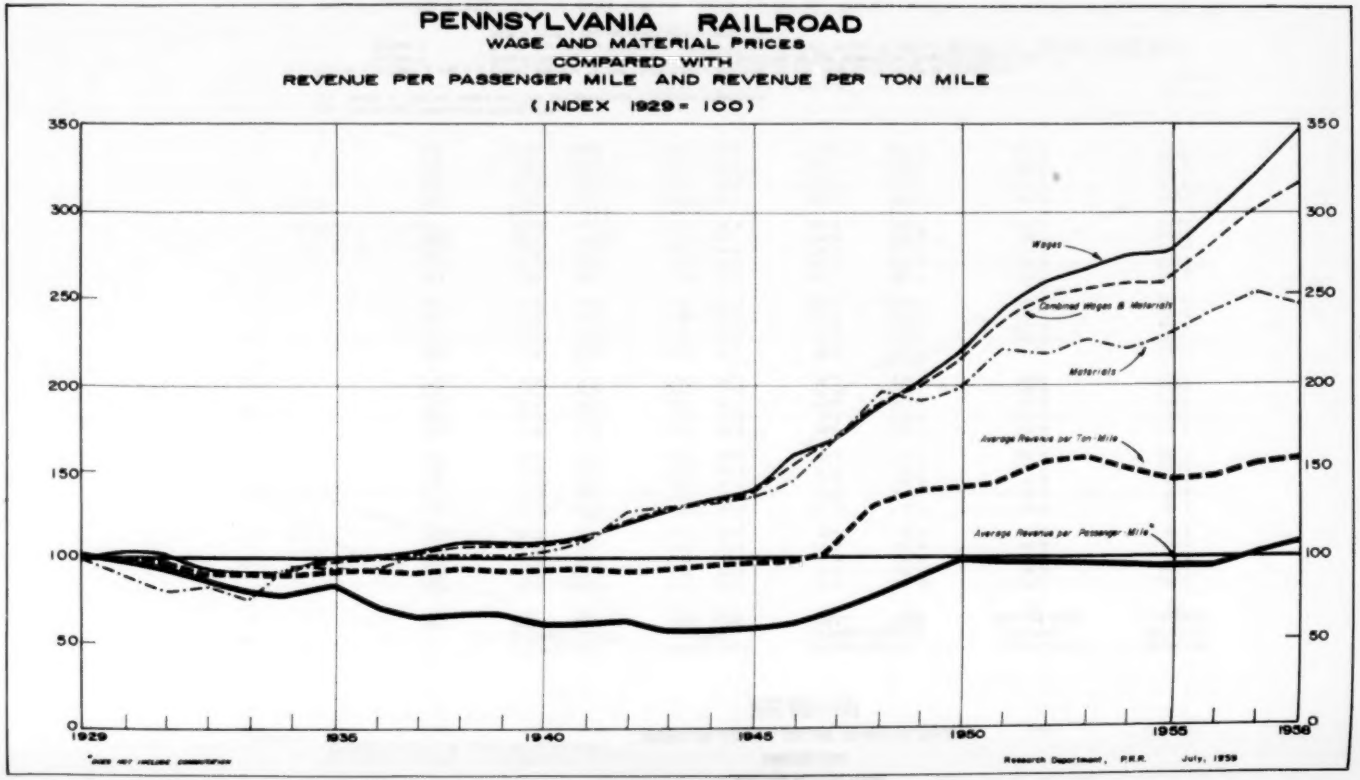
YEARS 1929 - 1958
(Index 1929 = 100)

Year (1)	Revenue per Passenger Mile(a) Cents (2)	Revenue per Passenger Mile(a) Index (3)	Revenue per Ton-Mile Cents (4)	Revenue per Ton-Mile Index (5)	Average Wages per Straight Time Hour Cents (6)	Average Wages per Straight Time Hour Index (7)	Supplies and Materials Weighted Index (8)	Wages and Materials Index(b) (9)
1929	3.55	100.0	0.99	100.0	72.9	100.00	100.0	100.0
1930	3.47	100.4	0.98	99.0	74.0	101.5	98.0	100.5
1931	3.33	93.8	0.95	96.0	74.8	102.6	80.5	96.0
1932	3.03	85.4	0.93	93.9	68.4	93.8	83.6	90.7
1933	2.87	80.8	0.89	89.9	67.2	92.2	75.8	87.3
1934	2.83	79.7	0.89	89.9	67.4	92.5	96.1	93.6
1935	2.93	82.5	0.91	91.9	73.7	101.1	94.1	99.0
1936	2.49	70.1	0.93	93.9	74.2	101.8	94.8	99.7
1937	2.29	64.5	0.90	90.9	75.7	103.8	101.1	103.0
1938	2.40	67.6	0.94	94.9	80.3	110.2	101.2	107.5
1939	2.40	67.6	0.92	92.9	79.8	109.5	100.6	106.8
1940	2.19	61.7	0.91	91.9	79.2	108.6	103.0	106.9
1941	2.14	60.3	0.92	92.9	81.2	111.4	108.8	110.6
1942	2.22	62.5	0.91	91.9	87.8	120.4	126.6	122.3
1943	2.06	58.0	0.92	92.9	93.4	128.1	129.6	128.6
1944	2.04	57.5	0.95	96.0	98.3	134.8	132.4	134.1
1945	2.06	58.0	0.95	96.0	98.6	135.3	135.0	135.2
1946	2.20	62.0	0.97	98.0	116.9	160.4	144.7	155.7
1947	2.46	69.3	1.08	109.1	122.3	167.8	170.2	168.5
1948	2.79	78.6	1.30	131.3	136.1	186.7	196.9	189.8
1949	3.14	88.5	1.38	139.4	147.9	202.9	190.3	199.1
1950	3.49	98.3	1.38	139.4	160.3	219.9	198.8	213.6
1951	3.39	95.5	1.43	144.4	178.5	244.9	220.0	237.4
1952	3.41	96.1	1.53	154.5	189.2	259.5	216.9	246.7
1953	3.40	95.8	1.57	158.6	193.9	266.0	226.2	254.1
1954	3.37	94.9	1.48	149.5	200.7	275.3	219.3	252.5
1955	3.33	93.8	1.43	144.4	202.7	278.1	224.5	262.8
1956	3.42	96.3	1.44	145.5	219.5	301.1	242.6	283.6
1957	3.67	103.4	1.51	152.5	235.5	323.0	255.7	302.8
1958	3.86	108.2	1.54	155.6	253.1	347.2	247.5	317.3

(a) Excluding Commutation Passengers.
(b) Based on 70% for wages and 30% for materials - average experience.

Source: Columns 2 and 4 - Annual Reports of the Pennsylvania Railroad to the Interstate Commerce Commission.
Column 6 - Form M-300 Report of the Pennsylvania Railroad to the Interstate Commerce Commission.
Column 8 - P.R.R. Purchasing Department, "Index of Average Unit Prices of Railway Material and Supplies, Average Price 1939 = 100" - converted to 1929 = 100.

Research Department - PRR
July 20, 1959



RETURN ON PROPERTY INVESTMENT

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD COMPANY

RETURN ON PROPERTY INVESTMENT

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD COMPANY

YEARS 1929 - 1958
(Index 1929 = 100)

As of December 31st	Class I railroads: Investment Less Recorded Depreciation(a) (Thousands) Amount	Index	Class I railroads: Net Railway Operating Income (Thousands) Amount	Index	Rate of Return(b)	Pennsylvania Railroad Company: Investment Less Recorded Depreciation(a) (Thousands) Amount	Index	Pennsylvania Railroad Company: Net Railway Operating Income (Thousands) Amount	Index	Rate of Return(b)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1929	$23,806,075	100.0	$1,251,698	100.0	5.30%	$2,153,552	100.0	$133,140	100.0	6.27%
1930	24,175,911	101.3	868,879	69.4	3.62	2,244,836	104.2	92,182	69.2	4.19
1931	23,886,566	100.1	525,628	42.0	2.19	2,272,413	105.5	51,056	38.3	2.26
1932	23,683,874	99.2	326,298	26.1	1.37	2,271,859	105.5	49,132	37.0	2.16
1933	23,406,964	98.1	474,296	37.9	2.01	2,224,291	103.3	61,977	46.6	2.76
1934	23,207,477	97.2	462,652	37.0	1.99	2,247,419	104.4	61,317	46.1	2.74
1935	23,136,479	97.0	499,819	40.0	2.16	2,274,540	105.6	71,395	52.9	3.11
1936	23,174,693	97.1	667,347	53.3	2.88	2,289,308	106.3	84,121	63.2	3.69
1937	23,093,457	96.8	590,204	47.2	2.55	2,262,655	105.1	73,001	54.8	3.21
1938	23,004,270	96.4	372,874	29.8	1.62	2,249,706	104.5	57,333	43.1	2.54
1939	23,016,835	96.4	568,829	47.0	2.46	2,236,542	103.9	77,304	58.1	3.45
1940	23,168,228	97.1	682,133	54.5	2.95	2,241,143	104.1	86,499	65.0	3.86
1941	23,300,631	97.6	998,256	79.8	4.30	2,269,233	105.4	97,102	73.0	4.31
1942	23,404,194	98.1	1,484,519	118.6	6.36	2,277,863	105.8	145,278	109.1	6.39
1943	23,654,530	99.1	1,359,768	108.6	5.78	2,330,121	108.2	127,546	95.8	5.54
1944	23,396,922	98.0	1,106,327	88.4	4.70	2,280,476	105.9	108,972	81.8	4.73
1945	22,666,514	94.7	852,147	68.1	3.70	2,218,308	103.0	87,181	65.5	3.88
1946	22,548,967	94.5	620,130	49.5	2.75	2,183,239	101.4	25,917	19.5	1.18
1947	22,891,188	96.0	784,694	62.4	3.44	2,235,754	103.8	32,311	24.3	1.46
1948	23,624,387	99.0	1,005,011	80.1	4.31	2,313,559	107.4	69,293	52.0	3.05
1949	24,028,409	100.7	686,487	54.8	2.88	2,304,222	107.0	37,178	28.0	1.61
1950	24,591,862	103.0	1,039,706	83.1	4.28	2,314,586	107.5	57,873	43.5	2.51
1951	25,518,512	107.0	942,542	75.3	3.76	2,428,866	112.8	59,530	44.7	2.51
1952	26,262,750	110.0	1,078,220	86.1	4.16	2,512,434	116.7	74,930	56.3	3.03
1953	26,670,457	111.7	1,109,399	88.6	4.19	2,507,262	116.4	74,796	56.2	2.98
1954	26,670,422	111.7	874,018	69.8	3.28	2,453,322	114.0	48,061	36.1	1.94
1955	26,851,343	112.5	1,127,997	90.1	4.22	2,407,032	111.8	68,967	51.8	2.84
1956	27,233,898	114.1	1,068,246	85.3	3.95	2,434,356	113.0	67,121	50.4	2.77
1957	27,680,047	116.0	942,334	75.7	3.36	2,403,384	111.6	43,154	32.4	1.78
1958	P 27,550,000	115.4	761,745	60.9	2.76	2,378,114	110.4	11,738	8.8	0.49

P Preliminary
(a) Includes material, supplies and cash
(b) Based on the average investment at the beginning and end of each year

Source: Financial Department - PRR

Research Department - PRR
July 20, 1959

RATE OF RETURN ON NET ASSETS(a)

LEADING CORPORATION GROUPS AND PENNSYLVANIA RAILROAD COMPANY

	Non-Regulated					Regulated									
						Public Utilities (b)			Transportation						
Year	Total Manufacturing	Total Amusements, Services, Etc.	Total Trade	Total Mining and Quarrying	Total Finance	Electric Power, Gas, Etc.	Telephone and Telegraph	Total Public Utilities	Miscellaneous(c)	Air Transport	Shipping	Class I Railroads	Traction and Bus	Total Transportation	Grand Total	Pennsylvania Railroad
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1929	12.8%	14.1%	13.9%	11.8%	12.0%	11.0%	11.2%	11.0%	-	-	5.7%	6.1%	-	6.1%	10.6%	9.7%
1930	6.4	11.9	7.0	3.4	1.1	9.5	9.7	9.5	-	-	4.3	3.5	-	3.5	5.7	6.2
1931	2.3	3.4	6.0	0.5	5.4	8.3	6.8	7.7	-	-	2.1	0.9	2.0%	1.2	2.4	1.6
1932	0.5	0.5	1.3	1.4	3.4	6.0	4.8	5.6	-	-	0.01	0.9	0.1	-1.1	0.2	1.2
1933	2.5	2.1	7.7	1.9	0.8	5.5	4.1	5.2	-	-	2.3	0.01	0.2	-0.01	2.1	1.6
5-year Average	4.9	6.4	7.2	3.8	4.5	8.1	7.3	7.8	-	-	2.9	2.3	0.8 (d)	1.9	4.2	4.1
1934	4.3	2.4	9.9	3.6	8.0	5.0	4.4	4.7	-	-	0.1	0.1	0.4	-0.1	3.6	1.6
1935	8.7	4.7	10.7	4.9	11.1	5.7	5.2	5.4	-	-	1.8	0.1	1.0	0.02	5.1	2.0
1936	10.4	7.6	13.2	6.5	11.7	6.0	7.2	6.2	-	-	4.3	1.2	0.4	1.5	7.4	3.3
1937	10.8	7.2	10.9	8.7	8.6	6.5	7.2	6.6	2.3%	-	2.2	0.7	-1.6	0.7	7.2	2.4
1938	4.8	4.4	8.4	4.6	7.0	6.0	6.2	5.9	1.8	-	1.3	0.9	-4.4	-1.0	3.8	1.0
5-year Average	7.4	5.3	10.6	5.7	9.3	5.8	6.0	5.8	2.1 (e)	-	1.9	0.6	-0.8	0.2	5.4	2.1
1939	8.5	6.3	11.3	6.3	7.9	6.7	7.7	6.9	5.5	10.3%	4.3	0.7	-2.0	0.8	6.2	2.9
1940	10.3	7.8	10.5	5.5	7.9	6.9	8.5	7.2	5.1	15.8	9.6	1.7	0.8	1.6	7.4	4.1
1941	12.4	8.8	11.3	7.8	7.9	6.5	7.6	6.7	5.5	8.2	10.9	4.6	0.9	4.6	9.2	4.6
1942	10.1	12.3	9.9	7.5	6.5	6.0	6.1	6.0	5.5	22.4	9.6	8.3	5.8	8.7	8.7	8.8
1943	9.9	11.7	10.1	6.9	7.9	6.4	7.0	6.5	6.2	20.4	6.5	7.8	5.8	7.7	8.6	7.0
5-year Average	10.2	9.4	10.6	6.8	7.6	6.5	7.5	6.7	5.6	15.4	8.2	4.6	-2.3	4.7	8.0	5.5
1944	9.8	11.7	10.2	7.6	7.7	6.4	6.7	6.5	6.9	22.6	6.3	5.7	5.7	5.8	8.2	5.1
1945	9.1	11.6	10.9	7.6	7.6	6.8	6.5	6.7	6.7	12.2	7.3	3.6	3.8	3.8	7.6	3.7
1946	14.1	19.4	22.3	9.5	6.5	8.9	6.9	8.2	4.5	0.9	15.3	2.3	7.5	2.6	9.5	-0.7
1947	17.0	13.8	18.3	15.1	6.8	9.0	5.8	8.0	9.5	16.9	12.9	3.6	1.0	3.7	12.2	0.6
1948	18.9	10.5	18.1	20.5	8.5	9.0	7.7	8.4	9.3	0.2	7.6	5.4	4.8	5.4	14.0	2.7
5-year Average	13.4	13.8	16.0	12.1	7.4	8.0	6.6	7.6	7.4	10.6	9.9	4.1	4.6	4.3	10.3	2.3
1949	13.8	9.4	13.2	13.5	9.4	9.6	8.9	8.7	8.4	6.6	4.9	3.2	1.5	3.3	11.0	1.0
1950	17.1	10.5	14.8	15.0	9.0	9.9	9.5	9.8	9.9	12.1	7.4	5.6	1.9	5.7	13.3	3.0
1951	14.4	9.8	11.5	13.3	7.9	9.0	8.9	9.0	7.9	15.7	9.4	4.8	3.8	5.2	11.4	2.0
1952	14.3	9.6	10.1	10.1	8.2	9.3	8.4	9.0	8.5	15.6	10.1	5.5	4.3	5.9	10.3	2.8
1953	12.5	11.0	9.9	8.1	8.3	9.5	8.7	9.2	10.0	14.0	9.3	5.7	5.0	6.0	10.5	2.7
5-year Average	14.0	10.1	11.9	12.0	8.6	9.5	8.5	9.1	8.9	12.8	8.2	5.0	3.3	5.2	11.3	2.3
1954	12.4	11.8	10.0	7.9	8.5	9.5	8.8	9.3	10.6	14.4	4.8	4.1	4.4	4.5	10.3	1.4
1955	15.0	12.3	13.1	11.9	7.7	9.9	9.5	9.7	12.2	13.9	9.5	5.7	4.6	6.1	12.0	2.9
1956	12.9	13.0	11.3	12.8	6.0	10.0	9.4	9.8	14.1	11.4	13.5	5.3	5.4	5.8	11.3	2.9
1957	12.9	12.0	10.8	9.6	6.9	9.5	8.9	9.3	11.3	5.0	11.2	4.6	5.4	5.0	10.6	1.4
1958	9.8	9.9	10.2	7.0	7.8	10.0	9.8	9.8	9.6	5.9	8.0	3.8	4.4	4.1	9.0	0.3
5-year Average	12.8	11.8	10.7	10.0	7.6	9.8	9.2	9.6	11.6	10.1	9.4	4.7	4.8	5.1	10.6	1.8

(a) Book net assets at the beginning of each year are based upon excess of total balance sheet assets over liabilities; the amounts at which are carried on the books are below present-day value.
(b) Due to large proportion of capital investment in the form of funded debt, rate of return on total property investment would be lower than that shown on net assets only.
(c) Includes oil pipelines, stockyards, automobile rentals, warehouses, terminal companies, roadway trucking, cold storage and air freight.
(d) Three year average
(e) Two year average

Source: Leading Corporation Groups - First National City Bank of New York
Pennsylvania Railroad - Finance Department, PRR

Research Department - PRR
July 10, 1959

ROAD AND TRACK FACILITIES AND TRAIN MILES OPERATED PER MILE OF MAIN TRACK

CLASS I RAILROADS AND THE PENNSYLVANIA RAILROAD

ROAD AND TRACK FACILITIES AND TRAIN MILES OPERATED PER MILE OF MAIN TRACK

CLASS I RAILROADS AND THE PENNSYLVANIA RAILROAD

YEARS 1929 - 1958
(Index 1944 = 100)

	Road and Track Facilities as of December 31st												Train Performance							
	Miles of Road Operated				Miles of Main Track Operated				Miles of All Tracks Operated				Total Train Miles Operated (Thousands)				Utilization of Capability			
	Class I (a)		P.R.R. (b)		Class I (a)		P.R.R. (b)		Class I (a)		P.R.R. (b)		Class I		P.R.R.		Tr. Miles Operated/Mile of Main Track			
													Class I		P.R.R.		Class I		P.R.R.	
Year	Miles	Index	Miles	Index	Miles	Index	Miles	Index	Miles	Index	Miles	Index	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1929	229,530	106.5	10,512	103.9	265,948	106.3	16,038	104.8	381,417	107.2	26,063	104.4	1,178,585	100.3	107,392	98.9	4,431.6	94.4	6,696.1	90.6
1930	227,643	106.7	10,892	107.7	266,546	106.5	16,578	108.3	383,077	107.6	26,754	107.2	1,082,306	92.1	99,253	87.7	4,060.5	86.5	5,987.0	81.0
1931	229,909	106.7	10,898	107.7	266,550	106.5	16,532	108.0	382,949	107.6	26,741	107.1	951,220	81.0	89,128	78.8	3,568.6	76.0	5,391.3	72.9
1932	228,674	106.1	10,892	107.7	265,125	106.0	16,440	107.4	381,314	107.1	26,721	107.1	831,091	69.2	74,157	65.5	3,134.7	66.7	4,510.8	61.0
1933	227,219	105.4	10,511	103.9	263,365	105.3	15,865	103.6	378,575	106.4	25,902	103.8	778,550	66.3	71,383	63.1	2,956.2	63.0	4,499.4	60.9
1934	226,883	104.8	10,471	103.5	261,672	104.6	15,769	103.0	375,945	105.6	25,658	102.8	809,285	68.8	71,323	63.0	3,089.0	65.8	4,523.0	61.2
1935	225,088	104.5	10,443	103.2	260,700	104.2	15,731	102.7	373,665	105.0	25,593	102.5	818,100	69.6	71,762	63.4	3,138.1	66.8	4,561.9	61.7
1936	223,962	104.0	10,311	101.9	259,360	103.7	15,513	101.3	370,992	104.2	25,316	101.4	891,017	75.8	79,161	70.0	3,435.4	73.2	5,104.1	69.1
1937	222,502	103.3	10,306	101.9	257,723	103.0	15,482	101.1	368,370	103.5	25,188	100.9	918,070	78.1	81,292	71.8	3,562.2	75.9	5,250.7	71.0
1938	221,753	103.0	10,287	101.7	256,842	102.7	15,457	101.0	366,214	102.9	25,072	100.4	816,180	69.5	67,863	60.0	3,177.8	67.7	4,390.4	59.4
1939	220,915	102.5	10,270	101.5	255,859	102.3	15,417	100.7	364,174	102.3	24,971	100.0	842,874	71.7	73,269	64.7	3,294.3	70.1	4,752.5	64.3
1940	220,016	102.1	10,249	101.3	254,839	101.9	15,466	100.6	362,078	101.7	24,928	99.9	873,489	74.3	78,162	69.1	3,427.6	73.0	5,073.5	68.6
1941	219,151	101.7	10,215	101.0	253,767	101.4	15,349	100.3	360,319	101.2	24,866	99.6	968,568	82.4	89,733	79.3	3,816.8	81.3	5,846.2	79.1
1942	218,948	100.7	10,174	100.6	251,518	100.5	15,308	100.0	356,784	100.3	24,840	99.5	1,094,025	93.1	105,143	92.9	4,349.7	92.6	6,868.5	92.9
1943	216,250	100.4	10,133	100.2	250,854	100.3	15,304	100.0	356,417	100.2	24,950	100.0	1,164,603	99.1	111,217	98.3	4,642.6	98.9	7,267.2	98.3
1944	216,403	100.0	10,115	100.0	250,167	100.0	15,310	100.0	355,881	100.0	24,960	100.0	1,174,854	100.0	113,167	100.0	4,696.3	100.0	7,391.7	100.0
1945	214,784	99.7	10,121	100.1	249,373	99.7	15,323	100.1	355,439	99.9	24,974	100.1	1,133,635	96.5	108,001	95.4	4,546.0	96.8	7,048.3	95.4
1946	214,812	99.7	10,113	100.0	249,269	99.6	15,325	100.1	355,392	99.9	24,983	100.1	1,038,660	88.4	100,280	88.6	4,166.8	88.7	6,543.3	88.5
1947	214,486	99.5	10,108	99.9	248,893	99.5	15,327	100.1	355,227	99.8	25,026	100.3	1,030,980	87.8	93,512	82.6	4,142.3	88.2	6,101.1	82.5
1948	214,512	99.5	10,145	100.3	248,887	99.5	15,363	100.3	355,484	99.9	25,122	100.6	991,804	84.4	88,076	77.8	3,985.0	84.9	5,733.0	77.6
1949	213,968	99.3	10,118	100.0	248,132	99.2	15,334	100.2	355,449	99.9	25,100	100.6	878,827	74.8	74,968	66.2	3,541.8	75.4	4,887.7	66.1
1950	213,539	99.1	10,112	100.0	247,538	99.0	15,327	100.1	354,775	99.7	25,110	100.6	872,516	74.3	73,444	64.9	3,524.8	75.1	4,791.8	64.8
1951	213,401	99.0	10,120	100.0	247,180	98.8	15,338	100.2	354,546	99.6	25,131	100.7	883,701	75.2	75,852	67.0	3,575.1	76.1	4,945.4	66.9
1952	212,838	98.8	10,090	99.8	246,403	98.5	15,305	100.0	353,878	99.4	25,112	100.6	847,359	72.1	71,315	63.0	3,439.0	73.2	4,659.6	63.0
1953	212,284	98.5	10,066	99.5	245,673	98.2	15,260	99.7	353,075	99.2	25,006	100.2	825,538	70.3	69,691	61.6	3,360.3	71.6	4,566.9	61.8
1954	211,846	98.3	10,034	99.2	244,913	97.9	15,122	98.8	352,085	98.9	24,895	99.7	764,263	65.1	62,042	54.8	3,120.5	66.4	4,102.8	55.5
1955	211,459	98.1	10,006	98.9	243,829	97.5	14,846	97.0	350,217	98.4	24,283	97.3	775,281	66.0	65,681	58.0	3,179.6	67.7	4,424.2	59.9
1956	210,414	97.6	9,963	98.5	241,872	96.7	14,648	95.7	347,928	97.8	23,855	95.6	765,427	65.2	65,185	57.6	3,164.6	67.4	4,450.1	60.1
1957	209,182	97.1	9,937	98.2	239,940	95.9	14,470	94.5	345,832	97.2	23,652	94.8	721,522	61.4	61,310	54.2	3,007.1	64.0	4,237.0	57.3
1958	E 208,600	96.8	9,917	98.0	E 238,150	95.2	14,378	93.9	345,359	97.0	23,555	94.4	646,823	55.1	52,504	46.4	2,716.0	57.8	3,651.7	49.4

E Estimated.
(a) Excludes trackage rights to avoid duplication.
(b) Includes trackage rights.

Source: Class I: "Statistics of Railways in the United States," Interstate Commerce Commission.
P.R.R. : Annual Reports to the Interstate Commerce Commission.

Research Department - PRR
July 15, 1959

AVERAGE MILES OF ROAD OPERATED IN FREIGHT AND PASSENGER SERVICE

CLASS I RAILROADS AND THE PENNSYLVANIA RAILROAD

YEARS 1929 - 1958

(INDEX 1944 = 100)

Year	Average Total Road Mileage Operated				Miles Operated in Freight Service				Miles Operated in Passenger Service				Passenger Service Mileage As Percent of Total	
	Class I		P.R.R.		Class I		P.R.R.		Class I		P.R.R.			
	Miles(a)	Index	Miles	Index	Miles	Index	Miles	Index	Miles	Index	Miles	Index	Class I	P.R.R.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1929	242,015	105.9	10,512	104.1										
1930	242,391	106.0	10,892	107.9										
1931	242,292	105.9	10,898	107.9										
1932	241,424	105.6	10,892	107.9										
1933	239,797	104.9	10,693	105.9										
1934	238,555	104.3	10,485	103.8										
1935	237,491	103.9	10,465	103.6										
1936	236,486	103.4	10,380	102.8	235,208	103.7	9,944	101.6	179,236	110.4	7,052	115.7	75.8	67.9
1937	235,376	103.0	10,312	102.1	233,197	102.8	9,930	101.5	175,543	108.2	7,012	115.1	74.6	68.0
1938	234,482	102.6	10,303	102.0	232,409	102.5	9,926	101.4	173,616	107.0	6,815	111.8	74.0	66.1
1939	233,404	102.1	10,288	101.9	231,362	102.0	9,899	101.2	172,031	106.0	6,789	111.1	73.7	65.8
1940	232,749	101.8	10,261	101.6	230,758	101.8	9,886	101.0	170,175	104.9	6,659	109.3	73.1	64.9
1941	232,166	101.5	10,241	101.4	230,094	101.5	9,866	100.8	167,951	103.5	6,488	106.5	72.3	63.4
1942	230,925	101.0	10,211	101.1	228,944	101.0	9,856	100.7	163,658	100.8	6,191	101.6	70.9	60.6
1943	229,283	100.2	10,169	100.7	227,360	100.3	9,840	100.6	162,429	100.1	6,094	100.0	70.8	59.9
1944	228,626	100.0	10,098	100.0	226,771	100.0	9,786	100.0	162,290	100.0	6,094	100.0	71.0	60.3
1945	228,365	99.9	10,121	100.2	226,644	99.9	9,934	101.5	161,920	99.8	6,063	99.5	70.9	59.9
1946	227,744	99.6	10,120	100.2	226,061	99.7	9,942	101.6	161,407	99.5	6,063	99.5	70.9	59.9
1947	227,927	99.7	10,115	100.2	225,975	99.6	9,939	101.6	161,115	99.3	6,083	99.5	70.7	59.9
1948	228,903	99.2	10,111	100.1	225,202	99.3	9,935	101.5	160,14	98.7	5,925	97.2	70.6	58.6
1949	226,546	99.1	10,140	100.4	224,985	99.2	9,964	101.8	156,821	96.6	5,806	95.3	69.2	57.3
1950	226,296	99.0	10,117	100.2	224,771	99.1	9,969,	101.9	147,511	90.9	5,622	92.3	65.2	55.6
1951	225,831	98.8	10,126	100.3	224,354	98.9	9,961	101.9	139,178	85.8	5,378	88.3	61.6	53.1
1952	225,687	98.7	10,117	100.2	224,180	98.9	9,959	101.8	134,903	81.9	5,383	88.3	58.9	53.2
1953	225,242	98.5	10,083	99.9	223,836	98.7	9,939	101.6	128,943	79.5	5,289	86.8	57.2	52.5
1954	224,816	98.3	10,050	99.5	223,433	98.5	9,905	101.2	124,572	76.8	5,219	85.6	55.4	51.9
1955	224,636	98.3	10,034	99.4	223,291	98.5	9,892	101.1	120,711	74.4	5,212	85.5	53.7	51.9
1956	223,455	97.7	9,963	98.7	222,251	98.0	9,893	101.1	115,907	71.4	4,319	70.9	51.9	43.4
1957	222,427	97.3	9,958	98.6	221,213	97.5	9,911	101.3	112,560	69.4	4,274	70.1	50.6	42.9
1958	221,712	97.0	9,940	93.5	220,528	97.2	9,892	101.1	106,928	65.9	4,271	70.1	48.2	43.0

Note: Includes trackage rights for both Class I Railroads and Pennsylvania Railroad.

(a) Prior to 1937, miles operated as of December 31st.

Source: Class I - "Statistics of Railways in the United States," Interstate Commerce Commission.
P.R.R. - Annual Reports to the Interstate Commerce Commission.

Research Department - PRR
July 15, 1959

ANNUAL TRAIN MILES BY CLASS OF SERVICE

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD

ANNUAL TRAIN MILES BY CLASS OF SERVICE

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD

YEARS 1929 - 1958
(Index 1944 = 100)
(Thousands)

Year	Freight Service Train Miles				Passenger Service Train Miles				Total Transportation Service Train Miles			
	Class I		P.R.R.		Class I		P.R.R.		Class I		P.R.R.	
	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	613,134	87.7	48,503	85.0	564,891	118.7	58,889	104.9	1,178,585	100.3	107,392	94.8
1930	539,182	77.2	42,127	73.8	542,683	114.0	57,126	101.8	1,082,306	92.1	99,253	87.7
1931	465,672	66.6	36,843	64.5	485,182	101.9	52,285	93.1	951,220	81.0	89,128	77.8
1932	392,445	56.2	29,490	51.6	420,348	88.3	44,667	79.6	813,091	69.2	74,157	65.5
1933	395,450	56.6	29,627	52.0	382,847	80.4	41,756	74.4	778,550	66.3	71,383	63.0
1934	423,885	60.7	30,352	53.1	384,145	80.7	40,971	73.0	808,285	68.8	71,323	63.0
1935	429,767	61.5	30,926	54.1	388,048	81.5	40,836	72.7	818,100	69.6	71,762	63.4
1936	486,341	69.6	36,543	64.0	404,676	85.0	42,638	75.9	891,017	75.8	79,181	69.9
1937	501,685	71.8	37,938	66.4	416,385	87.5	43,354	77.2	918,070	78.1	81,292	71.8
1938	422,388	60.4	27,934	49.0	393,792	82.7	39,929	71.1	816,180	69.5	67,863	59.9
1939	451,991	64.7	32,373	56.7	390,883	82.1	40,896	72.8	842,874	71.7	73,269	64.7
1940	481,892	69.0	36,549	64.0	391,597	82.3	41,613	74.1	873,489	74.3	78,162	69.0
1941	467,727	81.2	46,246	81.0	400,841	84.2	43,487	86.9	968,568	82.4	89,733	92.9
1942	666,437	95.4	56,340	98.7	427,588	89.8	48,803	86.9	1,094,025	93.1	105,143	98.2
1943	701,212	100.4	57,113	100.8	463,391	97.3	54,105	96.4	1,164,603	99.1	111,218	98.2
1944	698,761	100.0	57,063	100.0	476,093	100.0	56,104	100.0	1,174,854	100.0	113,167	100.0
1945	652,250	93.3	50,753	88.9	481,385	101.1	57,248	102.0	1,133,635	96.5	108,001	95.4
1946	590,413	84.5	46,630	81.7	448,247	94.1	53,650	95.6	1,038,660	88.4	100,280	88.6
1947	616,071	88.2	47,790	83.7	414,909	87.1	45,722	81.4	1,030,980	87.8	93,512	82.6
1948	584,671	83.7	43,859	76.8	407,133	85.5	44,217	78.8	991,804	84.4	88,076	77.8
1949	498,573	71.4	34,595	60.8	380,254	79.9	40,254	71.7	878,827	74.8	74,949	66.2
1950	514,971	73.7	36,279	63.5	357,545	75.1	37,165	66.2	872,516	74.3	73,444	64.8
1951	528,573	75.6	38,549	67.5	355,128	74.6	37,303	66.4	883,701	75.2	75,852	67.0
1952	502,891	72.0	35,801	62.7	344,468	72.4	35,513	63.2	847,359	72.1	71,314	63.0
1953	492,409	70.5	36,602	64.1	333,129	70.0	33,088	58.9	825,538	70.3	69,690	61.6
1954	447,122	64.0	31,239	54.7	317,141	66.6	39,803	70.9	764,263	65.1	62,042	54.8
1955	476,443	68.2	35,526	62.2	298,838	62.8	30,155	53.7	775,281	66.0	65,681	58.0
1956	475,561	68.1	36,483	63.9	289,866	60.9	28,702	51.1	765,427	65.2	65,185	57.6
1957	446,733	63.9	34,960	61.2	274,789	57.7	26,350	46.9	721,522	61.4	61,310	54.2
1958	400,420	57.3	29,468	51.6	246,402	51.8	23,036	39.2	646,823	55.1	52,504	46.3

Source: Class I "Statistics of Railways in the United States" - Interstate Commerce Commission.
P.R.R. Annual Reports to the Interstate Commerce Commission.

CLASS I RAILROADS

TRAFFIC UNITS PER MILE OF MAIN TRACK OPERATED

YEARS 1929 - 1958
(Index 1944 = 100)

Year	Revenue Ton-Miles (Thousands) Number	Index	Revenue Passenger Miles (Thousands) Number	Index	Traffic Units (Thousands) (a) Number	Index	Miles of Main Track Operated(b) Number	Index	Traffic Units Per Miles of Main Track Operated Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1929	447,321,561	60.7	31,074,135	32.5	509,469,831	54.9	265,948	106.3	1,915,675	51.6
1930	383,449,588	52.0	26,814,825	28.1	437,079,238	47.1	266,546	106.5	1,639,789	44.2
1931	309,224,879	41.9	21,894,421	23.0	353,013,721	38.0	266,550	106.5	1,324,381	35.7
1932	233,977,009	31.7	16,971,044	17.8	267,919,097	28.9	265,125	106.0	1,010,539	27.2
1933	249,223,180	33.8	16,340,510	17.1	281,904,200	30.4	263,365	105.3	1,070,394	28.8
1934	268,710,507	36.4	18,033,309	18.9	304,777,125	32.8	261,672	104.6	1,164,730	31.4
1935	282,036,932	38.3	18,475,172	19.3	318,988,076	34.4	260,700	104.2	1,223,583	33.0
1936	339,245,826	46.0	22,421,009	23.5	384,087,844	41.4	259,360	103.7	1,480,906	40.0
1937	360,620,269	48.9	24,655,414	25.8	409,931,097	44.2	257,723	103.0	1,590,588	42.9
1938	290,084,371	39.3	21,628,718	22.6	333,341,807	36.0	256,842	102.7	1,297,848	35.0
1939	333,438,412	45.2	22,651,334	23.7	378,741,080	40.8	255,859	102.3	1,480,273	39.9
1940	373,253,197	50.6	23,762,359	24.9	420,777,915	45.3	254,839	101.9	1,651,152	44.5
1941	475,072,001	64.4	29,350,429	30.7	533,772,459	57.5	253,767	101.4	2,103,396	56.7
1942	637,983,503	86.5	53,658,615	56.2	745,300,733	80.3	251,518	100.5	2,963,210	79.9
1943	727,075,495	98.6	87,819,503	92.0	902,714,501	97.2	250,854	100.3	3,598,565	97.0
1944	737,248,444	100.0	95,549,090	100.0	928,344,624	100.0	250,167	100.0	3,710,900	100.0
1945	681,000,757	92.4	91,717,226	96.0	864,435,209	93.1	249,373	99.7	3,466,435	93.4
1946	591,982,472	80.3	64,673,453	67.7	721,329,378	77.7	249,269	99.6	2,893,779	78.0
1947	654,728,304	88.8	45,920,576	48.1	745,569,456	80.4	248,893	99.5	2,999,560	80.8
1948	637,918,742	86.5	41,179,040	43.1	720,274,822	77.6	248,887	99.5	2,893,983	78.0
1949	526,500,360	71.4	35,094,501	36.7	596,689,362	64.3	248,132	99.2	2,404,726	64.8
1950	588,577,756	79.8	31,766,001	33.2	652,097,758	70.2	247,538	99.0	2,634,334	71.0
1951	646,820,439	87.7	34,613,546	36.2	715,847,531	77.1	247,180	98.8	2,896,058	78.0
1952	614,753,676	83.4	34,009,986	35.6	682,773,648	73.5	246,403	98.5	2,770,963	74.7
1953	605,813,437	82.2	31,655,134	33.1	669,123,705	72.1	245,673	98.2	2,723,636	73.4
1954	549,258,800	74.5	29,286,008	30.7	607,830,816	65.5	244,913	97.9	2,481,853	66.9
1955	623,614,866	84.6	28,525,744	29.9	680,666,354	73.3	243,829	97.5	2,791,573	75.2
1956	647,077,041	87.8	28,184,928	29.5	703,446,897	75.8	241,872	96.7	2,908,344	78.4
1957	618,193,517	83.9	25,824,493	27.1	669,962,503	72.2	239,940	95.9	2,792,208	75.2
1958	551,867,857	74.8	23,271,149	24.4	598,210,155	64.4	238,150	95.2	2,511,904	67.7

(a) Based on 1 unit for each revenue ton-mile, and 2 units for each revenue passenger mile.
(b) December 31. Excluding trackage rights to avoid duplication.

Source: Columns 2, 4 and 8: "Statistics of Railways in the United States" - Interstate Commerce Commission.

Research Department - Pak
July 15, 1959

PENNSYLVANIA RAILROAD

TRAFFIC UNITS PER MILE OF MAIN TRACK OPERATED

PENNSYLVANIA RAILROAD

TRAFFIC UNITS PER MILE OF MAIN TRACK OPERATED

YEARS 1929 - 1958
(Index 1944 = 100)

Year	Revenue Ton-Miles (Thousands) Number	Index	Revenue Passenger Miles (Thousands) Number	Index	Traffic Units (Thousands)(a) Number	Index	Miles of Main Track Operated(b) Number	Index	Traffic Units per Mile of Main Track Operated Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1929	48,991,173	68.7	4,002,210	30.7	56,995,593	58.5	16,038	104.8	3,553,784	55.9
1930	40,935,775	57.4	3,580,733	27.4	48,097,441	49.4	16,578	108.2	2,901,281	45.6
1931	33,153,777	46.5	2,917,314	22.4	38,988,405	40.0	16,532	108.0	2,358,360	37.1
1932	25,222,172	35.4	2,187,226	16.8	29,596,624	30.4	16,440	107.4	1,800,281	28.3
1933	26,818,385	37.6	2,016,645	15.5	30,851,675	31.7	15,865	103.6	1,944,638	30.6
1934	28,326,534	39.7	2,209,928	16.9	32,746,390	33.6	15,769	103.0	2,076,631	32.7
1935	29,757,235	41.8	2,217,260	17.0	34,191,755	35.1	15,731	102.7	2,173,527	34.2
1936	35,706,781	50.1	2,881,802	22.1	41,470,385	42.6	15,513	101.3	2,673,267	42.0
1937	38,049,998	53.4	3,294,746	25.2	44,639,490	45.8	15,492	101.1	2,883,315	45.3
1938	27,638,941	38.8	2,913,468	22.3	33,465,757	34.4	15,457	101.1	2,165,087	34.0
1939	34,745,746	48.8	3,147,223	24.1	41,040,192	42.2	15,417	100.7	2,662,009	41.9
1940	39,755,555	55.8	3,441,635	26.4	46,638,825	47.9	15,406	100.6	3,027,316	47.6
1941	52,096,022	73.1	4,329,901	33.2	60,755,824	62.4	15,349	100.3	3,956,292	62.2
1942	67,028,387	94.1	7,829,326	60.0	82,687,039	84.9	15,308	100.0	5,401,557	85.0
1943	71,261,015	100.0	12,168,329	93.2	95,597,673	98.2	15,304	100.0	6,246,581	98.2
1944	71,262,339	100.0	13,051,158	100.0	97,364,655	100.0	15,310	100.0	6,359,546	100.0
1945	63,688,834	89.4	12,802,328	98.1	89,293,490	91.7	15,323	100.1	5,827,416	91.6
1946	56,741,355	79.6	9,695,344	74.3	76,132,043	78.2	15,325	100.1	4,967,833	78.1
1947	61,381,595	86.1	6,783,773	52.0	74,949,141	77.0	15,327	100.1	4,890,007	76.9
1948	57,949,907	81.3	6,033,767	46.2	70,017,501	71.9	15,363	100.3	4,557,541	71.7
1949	44,867,189	63.0	5,049,455	38.7	54,966,099	56.5	15,334	100.2	3,584,590	56.4
1950	49,887,040	70.0	4,367,658	33.5	58,622,356	60.2	15,327	100.1	3,824,777	60.1
1951	54,825,398	76.9	4,840,992	37.1	64,507,382	66.3	15,338	100.2	4,205,723	66.1
1952	50,101,843	70.3	4,749,918	36.4	59,601,679	61.2	15,305	100.0	3,894,262	61.2
1953	50,241,369	70.5	4,322,525	33.1	58,886,419	60.5	15,260	99.7	3,858,874	60.7
1954	42,356,265	59.4	3,881,216	29.7	50,118,697	51.5	15,122	98.8	3,314,290	52.1
1955	50,134,500	70.4	3,744,400	28.7	57,623,300	59.2	14,846	97.0	3,881,402	61.0
1956	53,427,956	75.0	3,719,882	28.5	60,867,720	62.5	14,648	95.7	4,155,360	65.3
1957	50,651,414	71.1	3,429,732	26.3	57,510,878	59.1	14,470	94.5	3,974,491	62.5
1958	41,484,758	58.2	2,928,127	22.4	47,341,012	48.6	14,378	93.9	3,292,601	51.8

(a) Based on 1 unit for each revenue ton-mile, and 2 units for each revenue passenger mile.
(b) December 31, including trackage rights.

Source: Columns 2, 4 and 8: P.R.R. Annual Reports to Interstate Commerce Commission

Page 22. Chart, Pennsylvania Railroad, millions of gross ton-miles per track-mile 1940–44, east-west main lines. (Chart too large for readable reproduction in page size. Copy on file in committee office.)

Page 23. (Map for chart on p. 22.) (Too large for readable reproduction in page size. Copy on file in committee office.)

PENNSYLVANIA RAILROAD

VARIABLE EFFECT OF WAR-TIME TRAFFIC ON TRAFFIC DENSITY
ON DIFFERENT PARTS OF THE RAILROAD
SELECTED REPRESENTATIVE SECTIONS
MILLIONS OF GROSS TON MILES PER TRACK MILE 1940 and 1944

NORTH - SOUTH MAIN LINES

Location (1)	Location Number (2)	Freight North 1940 (3)	Freight North 1944 (4)	Freight South 1940 (5)	Freight South 1944 (6)	Freight Total 1940 (7)	Freight Total 1944 (8)	Passenger Total 1940 (9)	Passenger Total 1944 (10)	Total Freight and Passenger North 1940 (11)	Total Freight and Passenger North 1944 (12)	Total Freight and Passenger South 1940 (13)	Total Freight and Passenger South 1944 (14)	Total Freight and Passenger Total 1940 (15)	Total Freight and Passenger Total 1944 (16)	Change in Total Amount (17)	Change in Total Percent (18)
A. New York - Washington																	
1. Main Line																	
a. New York - Philadelphia		NOT AVAILABLE															
b. Philadelphia - Baltimore																	
(1) Newark, Del. - Perryville	3	-	-	-	-	-	-	-	-	39.66	79.92	43.45	65.03	83.11	144.95	61.84	74.41
(2) Baltimore - Perryville	4	-	-	-	-	-	-	-	-	39.67	81.98	43.45	86.34	83.12	168.32	85.20	102.50
(3) Washington - Baltimore	8	-	-	-	-	-	-	-	-	40.29	74.93	38.94	72.10	79.23	147.03	67.80	85.57
2. Freight Lines																	
a. Landover - Potomac Yard	9	38.95	55.41	30.22	46.78	67.17	102.19	NONE		38.95	55.41	30.22	46.78	67.17	102.19	33.02	49.16
B. To and From South New Jersey																	
1. Main Line																	
a. Camden - Morris	2	-	-	-	-	-	-	-	-	5.70	7.95	5.70	7.95	11.40	15.90	4.50	39.47
C. Wilmington - Cape Charles																	
1. Main Line	1	-	-	-	-	-	-	-	-	15.64	24.33	14.96	25.91	30.60	50.24	19.64	64.18
D. Buffalo - Baltimore																	
1. Main Line																	
a. Buffalo - Harrisburg																	
(1) Buffalo - Ebenezer Jct.	11	-	-	-	-	-	-	-	-	13.10	14.30	12.20	11.90	25.30	26.20	0.9	3.56
(2) Williamsport - McElhattan	10	-	-	-	-	-	-	-	-	39.87	58.94	15.49	21.15	55.36	80.09	24.73	44.67
(3) Sunbury - Rockville	6	-	-	-	-	-	-	-	-	29.81	44.00	16.62	21.21	46.43	65.21	18.78	40.45
b. Baltimore - Harrisburg																	
(1) Baltimore - York	7	-	-	-	-	-	-	-	-	5.89	9.40	5.01	9.22	10.90	18.62	7.72	70.83
2. Freight Lines																	
a. Harrisburg - Baltimore																	
(1) Perryville - Creswell	5	-	-	-	-	45.25	72.21	NONE		-	-	-	-	45.25	72.21	29.46	68.12
E. Cincinnati - Columbus																	
1. Main Line																	
a. Cincinnati - Zenia	12	8.18	12.53	5.37	8.40	13.55	20.93	2.97	3.99	-	-	-	-	16.52	24.92	8.40	50.85
F. Chicago - Louisville																	
1. Main Line																	
a. Chicago - Indianapolis																	
(1) Chicago - Logansport	14	8.75	12.12	8.30	14.34	17.05	26.46	3.96	6.62	-	-	-	-	21.01	33.08	12.07	57.45
b. Indianapolis - Louisville	13	3.56	5.26	2.72	5.82	6.28	11.08	2.01	3.30	-	-	-	-	8.29	14.38	6.09	73.46

Dash (-) used where data was not kept separately.

Source: P.R.R. special study.

Research Department - P.R.R.
July 13, 1959

Page 25. (Map for chart on p. 24.) (Too large for readable reproduction in page size. Copy on file in committee office.)

PENNSYLVANIA RAILROAD

43725 O—59—32

Dash (-) used where data was not kept separately.

Source: P.R.R. special study.

Research Department - P.R.R.
July 13, 1959

Page 25. (Map for chart on p. 24.) (Too large for readable reproduction in page size. Copy on file in committee office.)

PENNSYLVANIA RAILROAD

VARIABLE EFFECT OF WAR-TIME TRAFFIC ON TRAFFIC DENSITY
ON DIFFERENT PARTS OF THE RAILROAD
SELECTED REPRESENTATIVE SECTIONS
MILLIONS OF GROSS TON MILES PER TRACK MILE 1940 and 1944

BRANCHES

Location	Location Number	Freight						Passenger		Total Freight and Passenger						Change in Total	
		East or North		West or South		Total		Total		East or North		West or South		Total		Amount	Percent
		1940	1944	1940	1944	1940	1944	1940	1944	1940	1944	1940	1944	1940	1944		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
A. Anthracite Coal Area																	
1. Nescopeck Branch	7	-	-	-	-	1.13	1.01	NONE		-	-	-	-	1.13	1.01	- 0.12	- 10.62
2. Pottsville - Phoenixville	5	-	-	-	-	4.76	4.65	NONE		-	-	-	-	4.76	4.65	- 0.11	- 2.31
3. Pottsville - Newton	6	-	-	-	-	1.86	1.55	NONE		-	-	-	-	1.86	1.55	- 0.35	- 18.82
B. Bituminous Coal Area																	
1. South Fork - Scalp Level	15	5.50	10.80	2.10	5.40	7.60	16.20	NONE		5.50	10.80	2.10	5.40	7.60	16.20	8.60	113.60
2. Mingo Jct. - Ohio Jct.	19	5.00	2.70	2.60	1.50	7.60	4.20	NONE		5.00	2.70	2.60	1.50	7.60	4.20	- 3.40	- 44.74
3. Wheeling - Ohio Jct.	21	2.10	1.90	1.00	0.90	3.10	2.80	NONE		2.10	1.90	1.00	0.90	3.10	2.80	- 0.30	- 9.68
4. Wheeling - Benwood	20	-	-	-	-	-	-	-	-	4.00	3.50	3.40	3.60	7.40	7.10	- 0.30	- 4.05
C. Miscellaneous																	
1. Birmingham - Ft. Dix	1	-	-	-	-	-	-	-	-	-	-	-	-	0.27	0.30	0.03	11.11
2. Pavonia - Birmingham	2	-	-	-	-	-	-	-	-	-	-	-	-	0.60	0.44	- 0.16	- 26.67
3. Norristown - Phoenixville	3	-	-	-	-	-	-	-	-	2.86	3.06	2.16	1.95	5.02	5.01	- 0.01	- 0.20
4. Centerville Branch	4	-	-	-	-	-	-	-	-	-	-	-	-	0.51	0.32	- 0.19	- 37.25
5. Popes Creek Branch	8	-	-	-	-	-	-	-	-	-	-	-	-	0.65	0.96	0.31	47.69
6. York - Frederick	9	-	-	-	-	-	-	-	-	-	-	-	-	1.04	11.03	9.99	960.58
7. Lewistown Branch	12	-	-	-	-	0.47	0.44	NONE		-	-	-	-	0.47	0.44	- 0.03	- 6.38
8. Sodus Point - Stanley	10	-	-	-	-	-	-	-	-	-	-	-	-	5.75	7.35	1.60	27.83
9. Canandaigua - Stanley	11	-	-	-	-	-	-	-	-	-	-	-	-	2.38	1.36	- 1.02	- 42.86
10. Bellefont Branch	13	-	-	-	-	-	-	-	-	-	-	-	-	1.03	1.07	0.04	3.88
11. Ridgeway Branch	14	0.40	0.30	0.40	0.50	0.80	0.80	NONE		0.40	0.30	0.40	0.50	0.80	0.80	0.00	0.00
12. Warren - Clean	16	8.00	9.20	4.40	1.40	12.40	10.60	NONE		8.00	9.20	4.40	1.40	12.40	10.60	- 1.80	- 14.52
13. Oil City - Irvineton	17	7.90	8.50	4.00	1.40	11.90	9.90	NONE		7.90	8.50	4.00	1.40	11.90	9.90	- 2.00	- 16.81
14. Kiski Jct. - New Kensington	18	-	-	-	-	-	-	-	-	5.50	4.80	3.20	3.40	8.70	8.20	- 0.50	- 5.75
15. Niles - Ashtabula	22	9.90	12.20	8.20	10.10	18.10	22.30	NONE		9.90	12.20	8.20	10.10	18.10	22.30	4.20	23.20
16. Trinway - Zanesville	23	1.50	1.80	1.50	1.10	3.00	2.90	NONE		1.50	1.80	1.50	1.10	3.00	2.90	- 0.10	- 0.33
17. Cincinnati - Richmond	24	2.51	4.01	4.21	5.65	6.72	9.66	2.94	3.76	-	-	-	-	9.66	13.42	3.76	38.92
18. Ft. Wayne - Mackinaw City	25	1.16	1.15	1.23	1.24	2.39	2.39	0.72	0.55	-	-	-	-	3.11	2.94	- 0.17	- 5.47
19. Indianapolis - Vincennes	26	2.36	3.45	0.71	1.40	3.07	4.85	0.25	None	-	-	-	-	3.32	4.85	1.53	46.08
20. Terre Haute - Peoria	27	0.64	1.16	0.52	0.85	1.16	2.02	NONE		0.64	1.16	0.52	0.85	1.16	2.02	0.86	74.14

Dash (-) used where data was not kept separately.

Source: P.R.R. special study.

Research Department - P.R.R.
July 13, 1959

Page 27. (Map for chart on p. 26.) (Too large for readable reproduction in page size. Copy on file in committee office.)

CLASS I RAILROADS

MOTIVE POWER - SELECTED STATISTICS

YEARS 1929 - 1958

Year	Locomotive Units: Owned or Leased as of December 31st: Steam	Electric	Diesel	Other	Total	Average Tractive Effort (Pounds)(a)	Retired	Installed	Not in Service (Monthly Average): Unserviceable	Stored in Good Order	Locomotive Miles in Transportation Service (Thousands): Road: Freight	Passenger	Total	Active Freight Locomotive Average Daily Mileage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1929	56,936	601	22	12	57,571	44,865	NA	691	NA	NA	694,334	538,775	1,624,371	91.2
1930	55,875	618	74	15	56,582	45,299	NA	858	NA	NA	606,066	506,822	1,453,756	89.6
1931	54,385	670	77	17	55,149	45,895	NA	181	10,658	10,658	517,239	442,069	1,241,354	88.2
1932	52,492	725	77	22	53,316	46,442	2,141	90	13,238	11,311	431,452	375,337	1,030,642	86.2
1933	50,064	738	79	22	50,903	47,013	2,401	14	15,544	8,450	437,436	341,914	1,000,545	89.8
1934	47,436	748	97	23	48,304	47,797	2,743	90	15,171	5,947	469,927	344,826	1,050,150	94.3
1935	45,614	842	113	25	46,594	48,562	1,966	139	14,333	4,604	477,895	351,042	1,068,532	93.5
1936	44,162	817	143	24	45,146	49,049	1,644	98	11,934	3,145	546,527	373,398	1,196,131	105.2
1937	43,624	818	218	23	44,683	49,515	973	441	9,750	3,040	563,718	385,731	1,239,196	104.5
1938	42,637	829	314	30	43,810	49,923	1,129	252	11,138	4,570	470,769	358,174	1,068,655	99.3
1939	41,117	843	510	41	42,511	50,518	1,660	298	11,003	3,020	507,601	357,252	1,127,174	104.0
1940	40,041	858	797	25	41,721	51,114	1,260	421	9,100	2,975	543,478	360,304	1,187,669	107.5
1941	39,624	857	1,267	23	41,771	51,427	718	432	7,121	1,874	645,705	380,185	1,362,104	116.4
1942	39,491	855	1,667	20	42,033	52,030	1,351	716	4,859	1,116	769,722	421,087	1,567,530	122.4
1943	39,725	868	2,125	13	42,731	52,749	268	891	4,441	693	813,249	465,716	1,670,977	124.5
1944	39,681	863	3,049	19	43,612	53,153	519	1,245	4,652	815	806,638	471,074	1,671,307	122.8
1945	38,853	842	3,816	19	43,530	53,528	1,110	901	5,162	1,231	750,211	477,124	1,611,880	118.4
1946	37,551	832	4,441	17	42,841	54,051	1,424	712	6,129	1,978	674,353	437,779	1,478,367	115.9
1947	35,108	821	5,772	18	41,719	54,870	2,739	1,398	5,669	1,360	703,221	399,647	1,487,813	120.3
1948	32,914	829	8,089	19	41,851	55,666	2,377	2,350	5,415	1,581	663,244	386,805	1,427,785	116.8
1949	28,964	817	10,888	22	40,691	56,497	4,099	2,884	5,696	3,205	553,107	357,732	1,238,010	112.5
1950	25,640	788	14,047	19	40,494	57,270	3,495	3,215	5,993	1,976	567,990	337,628	1,247,181	119.3
1951	21,747	780	17,493	16	40,036	58,386	4,093	3,514	5,667	1,725	478,680	337,594	1,269,962	122.5
1952	16,078	756	20,492	17	37,343	59,400	5,851	3,062	4,516	2,084	543,917	325,432	1,204,633	126.8
1953	11,787	699	22,503	20	35,009	60,131	4,412	2,141	3,420	2,197	527,412	310,589	1,168,469	132.7
1954	8,650	656	23,531	35	32,872	60,661	3,297	1,126	2,965	3,070	474,084	294,272	1,067,081	137.4
1955	5,982	627	25,786	34	31,429	61,028	2,534	1,097	2,813	1,421	506,106	276,537	1,100,980	148.7
1956	3,714	606	26,081	32	30,433	61,572	2,480	1,210	2,178	758	504,936	267,085	1,093,864	150.2
1957	2,447	585	27,186	30	30,248	61,515	1,517	1,015	1,580	985	472,100	249,993	1,028,064	145.9
1958	1,387	557	27,585	31	29,560	61,410	1,123	E 434	NA	NA	419,683	222,977	912,064	141.6

E - Estimated by Association of American Railroads
NA Not Available
(a) Excludes diesel units prior to 1940

Source: Columns 2 through 9 - "Statistics of Railways in the United States", Interstate Commerce Commission
10 and 11 - (1929-1954), "Statistics of Railways in the United States", Interstate Commerce Commission (1955-1959), "O.S." Statements, Interstate Commerce Commission
12, 13, 14, and 15 - "O.S." Statements, Interstate Commerce Commission

Research Department - PRR
July 10, 1959

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PENNSYLVANIA RAILROAD

MOTIVE POWER - SELECTED STATISTICS

PENNSYLVANIA RAILROAD

MOTIVE POWER - SELECTED STATISTICS

YEARS 1929 - 1959

Year	Locomotive Units: Owned or Leased as of December 31st: Steam	Electric	Diesel	Total	Average Tractive Effort (Pounds)	Retired	Installed	Not In Service (Monthly Average): Unserviceable	Stored In Good Order	Locomotive Miles in Transportation Service (Thousands): Road: Freight	Passenger	Total	Active Freight Locomotive Average Daily Mileage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1929	5,887	50	2	5,939	50,829	466	4	637	556	NA	NA	172,733	NA
1930	5,580	55	3	5,638	51,991	407	106	627	1,130	NA	NA	153,435	NA
1931	5,331	61	3	5,395	52,714	249	6	539	1,450	NA	NA	131,833	NA
1932	5,116	115	3	5,234	53,426	215	54	857	1,564	NA	NA	106,716	NA
1933	4,919	127	3	5,049	54,078	199	14	1,567	988	NA	NA	104,052	NA
1934	4,814	143	3	4,960	54,405	105	16	1,660	531	NA	NA	105,212	NA
1935	4,676	231	3	4,910	55,073	138	88	1,843	384	NA	NA	106,587	NA
1936	4,568	230	3	4,801	55,515	109	-	1,449	251	46,352	42,914	123,100	89
1937	4,468	234	4	4,706	55,891	101	6	934	558	48,528	43,522	127,038	102
1938	4,379	244	4	4,627	56,247	89	10	1,377	780	36,961	38,312	101,589	103
1939	4,268	261	4	4,533	56,735	112	18	1,557	288	43,862	39,417	113,454	113
1940	4,249	280	4	4,533	56,867	20	20	1,174	403	49,053	40,826	122,897	115
1941	4,242	282	5	4,529	56,974	7	3	698	264	61,455	44,041	148,388	113
1942	4,251	277	15	4,543	57,083	23	37	249	140	75,034	51,738	174,859	114
1943	4,358	287	21	4,666	58,160	-	123	283	18	76,051	57,760	184,242	114
1944	4,378	282	21	4,681	58,434	5	20	326	24	75,098	59,814	186,274	110
1945	4,408	282	29	4,719	58,694	8	46	326	108	67,264	59,880	176,230	100
1946	4,372	282	38	4,692	59,127	73	46	503	185	61,305	56,351	163,550	98
1947	4,131	277	127	4,535	59,912	246	89	499	72	61,554	48,663	158,288	95
1948	3,569	270	513	4,352	60,917	569	386	543	94	55,591	43,715	144,895	93
1949	2,822	268	840	3,930	62,166	749	327	638	324	42,797	39,139	117,731	95
1950	2,356	267	1,177	3,800	62,477	467	337	642	66	44,156	36,191	117,169	108
1951	2,155	272	1,557	3,985	62,805	201	386	547	107	46,417	36,623	121,587	114
1952	1,721	275	1,889	3,885	62,834	435	335	562	174	42,291	34,459	112,423	119
1953	1,391	277	1,963	3,631	62,259	330	76	-	-	42,483	31,083	108,566	126
1954	1,203	277	1,984	3,464	62,378	189	22	536	303	35,722	28,288	93,141	144
1955	857	277	2,051	3,185	62,317	346	67	663	182	40,835	27,448	100,789	151
1956	455	276	2,134	2,865	62,564	403	83	511	26	41,931	25,931	101,523	149
1957	319	283	2,359	2,961	62,340	136	232	290	70	40,004	23,497	95,365	144
1958	21	282	2,389	2,692	61,064	318	56	218	158	32,864	20,023	78,903	144
1959 June 1	0	281	2,423	2,704	NA	22	-	179	23	14,563	7,763	NA	152

NA - Not Available

Source: Columns 2, 3, 4, 7 and 8 - Chief Mechanical Officer, PRR
6 - PRR Annual Reports to the Interstate Commerce Commission
9 and 10 - (1929-1954) PRR Annual Reports to the Interstate Commerce Commission. (1955-1959) PRR "OS" Statements to the Interstate Commerce Commission
11, 12, 13 and 14 - PRR "OS" Statements to the Interstate Commerce Commission

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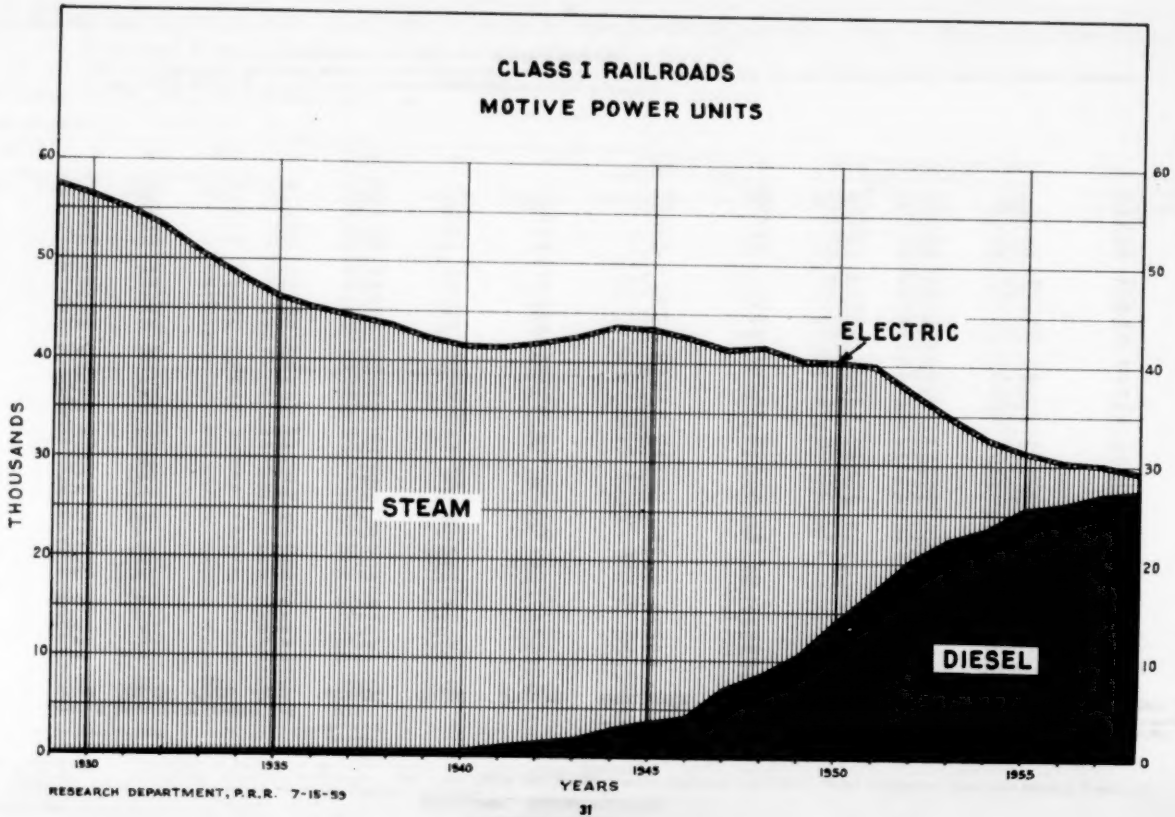

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MOTIVE POWER CAPABILITIES

TRAILING GROSS TON-MILES PER POUND TRACTIVE EFFORT

MOTIVE POWER CAPABILITIES

TRAILING GROSS TON-MILES PER POUND TRACTIVE EFFORT

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD

YEARS 1929 - 1958
(Index 1941 = 100)

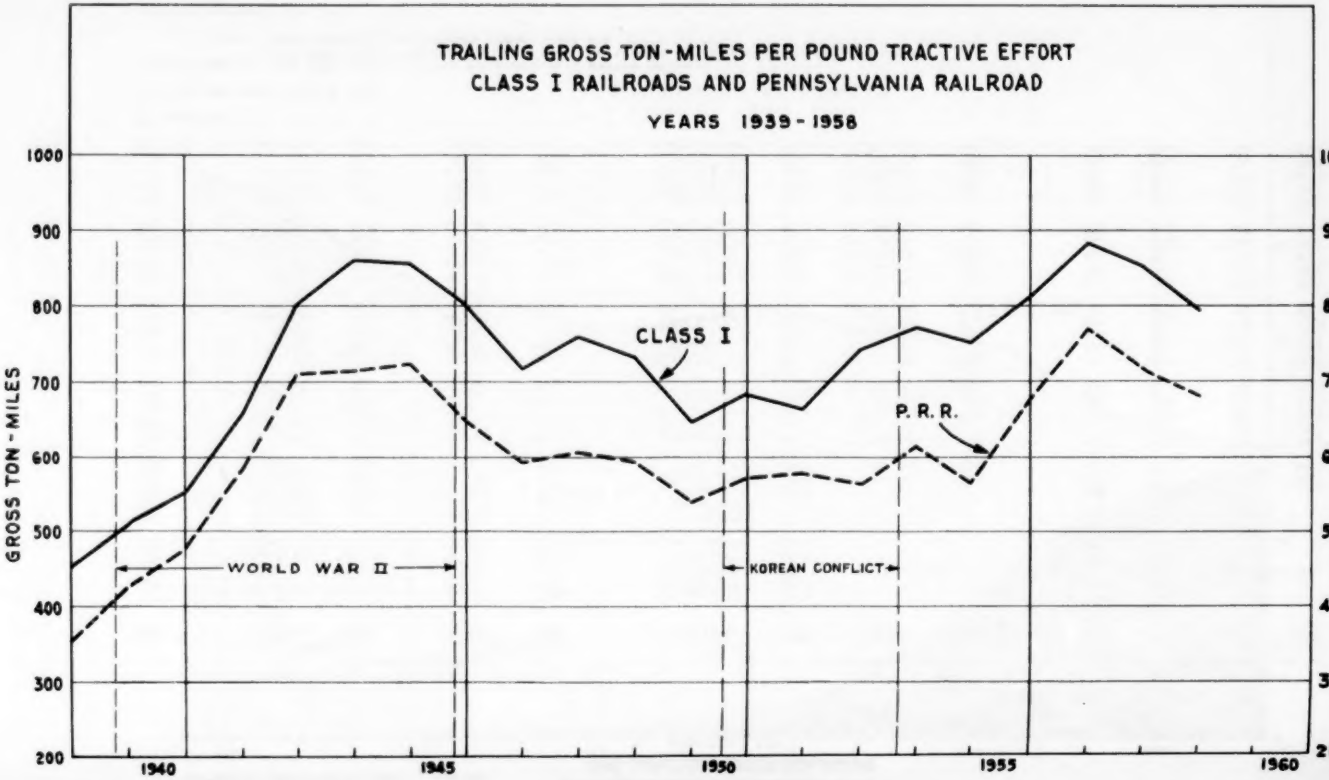
Year	Locomotive Tractive Effort (Road and Switching) In Thousands of Pounds(a) Class I Total	Class I Index	P.R.R. Total	P.R.R. Index	Trailing Gross Ton-Miles Class I Thousands	Class I Index	P.R.R. Thousands	P.R.R. Index	Trailing Gross Ton-Miles per Pound Tractive Effort Class I Units	Class I Index	P.R.R. Units	P.R.R. Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	2,561,156	111.4	301,810	110.4	1,441,865,000	70.6			543	63.4		
1930	2,558,308	110.4	293,026	107.2	1,254,365,000	63.2			490	57.2		
1931	2,524,376	108.9	284,295	104.0	1,062,305,000	53.5	NOT AVAILABLE		421	49.2	NOT AVAILABLE	
1932	2,468,943	106.6	279,421	102.2	844,191,600	42.5			342	39.9		
1933	2,387,755	103.0	272,942	99.8	850,253,000	43.1			359	41.9		
1934	2,302,578	99.4	269,753	98.7	920,248,000	46.3			400	46.7		
1935	2,251,406	97.2	270,312	98.9	949,375,000	47.8			422	49.2		
1936	2,207,414	95.3	266,429	97.4	1,100,576,000	55.5			499	58.2		
1937	2,200,510	95.0	262,925	96.2	1,155,422,068	58.2	117,182,171	59.4	525	61.3	446	61.8
1938	2,169,392	93.6	260,159	95.1	990,664,580	49.9	93,523,838	47.4	457	53.3	359	49.7
1939	2,127,771	91.8	257,080	94.0	1,089,291,714	54.9	109,701,513	55.6	512	59.7	427	59.1
1940	2,141,666	92.4	257,678	94.2	1,181,916,418	59.5	121,657,581	61.7	552	64.4	472	65.4
1941	2,147,022	92.7	257,935	94.3	1,413,205,880	71.2	150,135,058	76.1	658	76.8	582	80.6
1942	2,186,038	94.3	259,116	94.8	1,756,932,913	88.4	183,677,133	93.2	804	93.8	710	98.3
1943	2,250,304	97.1	271,276	99.2	1,939,548,930	97.7	193,600,882	98.1	862	100.6	714	98.9
1944	2,317,089	100.0	273,433	100.0	1,985,311,562	100.0	197,305,939	100.0	857	100.0	722	100.0
1945	2,329,074	100.5	276,881	101.3	1,865,598,440	94.0	179,501,947	91.0	801	93.5	648	89.8
1946	2,314,662	99.9	277,326	101.4	1,662,848,645	83.8	164,621,004	83.4	718	83.8	594	82.3
1947	2,288,136	98.8	271,634	99.3	1,739,691,140	87.6	164,195,118	83.4	760	88.7	606	83.9
1948	2,320,325	100.1	265,046	96.9	1,701,483,056	85.7	157,470,090	79.8	733	85.5	594	82.3
1949	2,297,691	99.2	244,247	89.3	1,486,918,679	74.9	131,700,730	66.7	647	75.5	539	74.7
1950	2,317,990	100.0	237,349	86.8	1,588,067,904	80.0	135,844,597	68.8	685	79.9	572	79.2
1951	2,525,849	109.0	250,213	91.5	1,680,589,730	84.7	144,579,082	73.3	665	77.6	579	80.2
1952	2,217,153	95.7	244,078	89.3	1,643,388,118	82.8	137,296,051	69.6	741	86.5	563	78.0
1953	2,102,916	90.8	223,228	81.6	1,621,580,271	81.7	137,386,815	69.6	771	90.0	615	85.2
1954	1,991,941	86.0	213,271	78.0	1,496,670,129	75.4	120,904,199	61.3	751	87.6	567	78.5
1955	2,006,829	86.6	198,481	72.6	1,625,358,731	81.9	134,338,435	68.1	810	94.5	677	93.8
1956	1,871,844	80.8	179,247	65.6	1,653,969,205	83.3	138,084,927	70.0	884	103.2	770	106.6
1957	1,856,865	80.2	184,590	67.5	1,567,410,011	78.0	131,805,501	66.8	854	99.6	714	98.9
1958 E	1,811,396	78.2	164,812	60.3	1,438,115,541	72.4	112,085,311	56.8	794	92.6	680	94.2

E Estimated

(a) Excludes diesels prior to 1940.

Source: Class I: Years 1929 - 1936 - Estimated by Association of American Railroads
Years 1937 - 1958 - "Statistics of Railways in the United States" - Interstate Commerce Commission.
P.R.R.: Annual Reports to the Interstate Commerce Commission.

Research Department - PRR
July 16, 1959



RESEARCH DEPARTMENT, P.R.R. 7-7-59

33

CLASS I RAILROADS

FREIGHT CARRYING CARS - SELECTED STATISTICS

YEARS 1939 - 1958

CLASS I RAILROADS

FREIGHT CARRYING CARS - SELECTED STATISTICS

YEARS 1929 - 1959

Year (1)	Ownership - December 31st: Number (2)	Capacity (Tons): Aggregate (3)	Capacity (Tons): Average (4)	Retired (5)	Installed (6)	Bad Order (Monthly Average): Number (7)	Bad Order (Monthly Average): Percent of Ownership (8)	Surplus: Maximum (9)	Surplus: Average (10)	Shortages: Maximum (11)	Shortages: Average (12)
1929	2,277,644	105,410,586	46.3	NA	80,921	136,554	6.0	447,141	233,873	626	64
1930	2,276,793	106,179,768	46.6	NA	73,516	139,326	6.1	706,536	456,378	0	0
1931	2,201,407	103,421,700	47.0	NA	10,817	172,608	7.7	750,696	611,953	0	0
1932	2,144,831	100,901,484	47.0	NA	2,843	231,434	10.7	772,565	694,022	0	0
1933	2,034,788	96,734,269	47.5	NA	1,868	290,819	14.0	691,587	515,451	0	0
1934	1,938,277	92,968,503	48.5	118,111	24,076	295,154	14.9	435,819	363,813	0	0
1935	1,835,654	88,677,106	48.3	108,320	8,681	280,573	15.0	376,575	283,431	0	0
1936	1,758,093	85,721,064	48.8	112,139	39,350	249,573	14.1	251,079	163,647	836	125
1937	1,743,743	85,808,067	49.2	80,629	71,849	189,781	11.0	283,248	143,748	3,035	346
1938	1,699,597	84,032,035	49.4	60,390	18,474	222,905	12.8	329,023	258,225	0	0
1939	1,649,942	82,001,557	49.7	73,390	24,396	205,396	12.8	265,414	168,018	721	37
1940	1,653,574	82,722,361	50.0	54,209	65,350	141,287	8.8	190,370	131,052	0	0
1941	1,703,224	85,682,497	50.3	26,264	78,302	85,004	5.4	193,344	79,482	0	0
1942	1,745,426	88,186,516	50.5	14,928	62,578	54,680	3.2	89,361	60,241	0	0
1943	1,756,277	88,967,614	50.7	13,287	28,704	44,338	2.7	81,512	40,022	5,013	1,361
1944	1,769,519	89,960,375	50.8	24,353	39,960	48,923	2.7	28,998	17,538	7,926	3,364
1945	1,760,239	89,872,361	51.1	43,852	37,458	63,794	3.5	23,436	12,877	19,397	9,652
1946	1,743,008	89,391,388	51.3	52,268	39,299	73,689	4.2	155,331	25,453	39,089	15,104
1947	1,734,191	89,224,538	51.5	62,058	57,031	73,762	4.2	47,630	6,554	41,178	25,098
1948	1,759,523	91,294,223	51.9	68,790	96,204	81,031	4.6	157,441	18,770	22,091	12,212
1949	1,753,728	91,961,055	52.4	84,843	78,876	109,139	6.2	207,627	81,203	12,452	2,456
1950	1,721,231	90,464,729	52.6	71,919	39,872	120,048	6.9	200,552	32,974	39,477	16,608
1951	1,752,391	92,671,044	52.9	53,871	84,218	88,086	5.1	49,810	8,319	37,828	15,707
1952	1,758,933	93,543,700	53.2	59,102	63,748	94,207	5.4	47,467	16,558	18,558	4,841
1953	1,776,781	95,074,549	53.5	45,213	67,548	90,276	5.1	111,681	43,490	5,459	2,321
1954	1,736,022	93,196,281	53.7	70,919	28,405	109,328	6.2	140,759	92,271	3,664	845
1955	1,698,791	91,229,260	53.7	71,038	35,738	102,970	6.0	76,116	18,815	22,659	8,631
1956	1,706,828	92,161,038	54.0	46,182	59,768	71,443	4.2	27,796	7,484	18,951	6,754
1957	1,745,706	95,083,869	54.5	49,481	88,462	78,641	4.6	76,154	17,897	3,273	1,479
1958	1,724,213	94,486,434	54.8	60,239	P 39,278	123,738	7.1	134,581	77,078	7,495	1,235
1959	1,702,896(a)	NA	NA	NA	NA	137,432(b)	8.1(b)	61,724	26,666(c) 29,465(d)	5,205	2,283(c) 2,638(d)

P - Preliminary
NA- Not Available

(a) May 31.
(b) June 1.
(c) Week ended May 30.
(d) Week ended July 4.

Source: 1929-1958; Columns 2 through 5, "Statistics of Railways in the United States", Interstate Commerce Commission.
Columns 6 through 12, Association of American Railroads.
1959; Car Service Division, Association of American Railroads.

Research Department - PRR
July 19, 1959

PENNSYLVANIA RAILROAD

FREIGHT CARRYING CARS - SELECTED STATISTICS

YEARS 1929 - 1959

Year	Owned and Leased - December 31st: Number	Capacity (Tons): Aggregate	Capacity (Tons): Average	Retired	Installed	Bad Order (Monthly Average): Number	Bad Order (Monthly Average): Percent of Ownership	Maximum Surplus	Maximum Shortage
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1929	266,178	14,562,125	55.0	8,453	7,832	14,200	5.3	65,172	0
1930	268,252	14,673,785	55.0	600	2,563	11,956	4.4	96,721	0
1931	268,189	14,700,100	55.0	1,602	1,501	16,961	6.3	118,121	0
1932	266,800	14,458,520	54.0	1,405	NA	22,450	8.3	125,618	0
1933	267,382	14,487,560	54.0	723	1,285	32,900	12.2	101,723	0
1934	266,861	14,490,360	54.0	7,538	7,000	38,091	14.1	71,088	0
1935	245,406	13,419,315	55.0	21,702	100	45,204	18.2	68,635	0
1936	243,444	13,368,420	55.0	12,141	9,978	44,699	18.2	38,639	0
1937	234,257	12,930,920	55.0	11,368	2,158	41,128	17.4	35,439	0
1938	235,401	13,021,745	55.0	543	1,674	46,889	19.7	54,852	0
1939	233,786	12,941,525	55.0	1,750	2	51,696	21.9	34,580	0
1940	231,620	12,856,105	55.5	5,831	3,398	37,595	16.1	37,478	0
1941	232,937	12,995,080	55.8	3,686	5,154	23,174	9.9	26,970	0
1942	237,244	13,234,090	55.8	103	4,589	8,480	3.5	23,478	0
1943	238,002	13,298,038	55.9	189	1,001	6,765	2.8	30,735	0
1944	238,161	13,306,588	55.9	332	500	7,647	3.2	11,333	0
1945	237,651	13,281,088	55.9	640	115	11,400	4.7	10,656	550
1946	237,813	13,294,618	55.9	576	685	19,070	7.9	47,812	1,790
1947	225,769	12,693,121	56.2	13,126	1,067	23,362	10.2	NA	3,936
1948	218,460	12,342,521	56.5	9,133	1,789	21,646	9.8	NA	2,423
1949	197,397	11,319,816	57.3	22,660	1,518	28,214	14.1	38,744	990
1950	192,743	11,160,018	57.9	10,277	5,550	31,851	16.3	36,131	4,244
1951	197,154	11,524,463	58.5	10,390	14,886	18,638	9.3	NA	2,240
1952	191,450	11,259,515	58.8	9,219	3,438	19,373	10.0	6,202	1,697
1953	189,776	11,221,096	59.1	5,229	3,513	15,937	8.3	35,495	272
1954	183,342	10,830,436	59.1	6,951	491	23,088	12.4	40,217	309
1955	168,312	9,940,391	59.1	19,583	4,504	23,035	13.5	13,502	2,935
1956	170,221	10,068,616	59.2	2,830	4,703	12,120	7.0	11,219	929
1957	172,807	10,251,006	59.3	2,108	4,671	16,541	9.5	15,420	415
1958	171,470	10,186,721	59.4	5,543	4,170	30,837	17.8	35,225	60
1959	162,668(a)	9,657,551	59.4	14,027	5,245	35,459(b)	21.8(b)	8,348(c)	152(c)

NA - Not Available

(a) July 1.
(b) Five months ended May 31.
(c) Week ended July 4.

Source: Columns 2 and 3; 1929-1958, PRR Annual Reports to the Interstate Commerce Commission.
1959, Supervisor of Equipment Expenditures - PRR.
Columns 5 and 6; 1929-1958, Supervisor of Equipment Expenditures - PRR
Columns 7 and 8; 1929-1959, PRR statement CS-F to the Interstate Commerce Commission.
Columns 9 and 10; Statement "CS-44A", Association of American Railroads.

Research Department - PRR
July 30, 1959

CLASS I RAILROADS

CLASSIFICATION OF FREIGHT CARRYING CARS

CLASS I RAILROADS

CLASSIFICATION OF FREIGHT CARRYING CARS

YEARS 1929 - 1959

As of December 31st	Box		Flat		Stock		Gondolas & Hoppers		Tank		Refrigerator		Others		Total	
	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons	Number	Average Capacity Tons
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1929	1,053,057	41.1	99,397	43.2	84,683	37.2	913,464	53.6	9,613	44.7	40,741	32.9	76,509	51.9	2,277,464	46.3
1930	1,059,604	41.5	99,097	43.8	84,007	37.3	908,245	53.9	9,515	45.0	40,358	33.2	75,967	52.4	2,276,793	46.6
1931	1,017,445	41.9	96,124	44.0	80,481	37.7	884,690	54.1	9,388	45.0	38,338	33.2	74,941	52.6	2,201,407	47.0
1932	987,184	42.0	91,739	44.2	77,833	37.9	868,342	54.0	8,921	45.0	37,058	33.4	73,554	52.8	2,144,631	47.0
1933	926,045	42.5	86,968	44.7	74,986	38.0	833,667	54.3	8,900	45.0	32,271	33.8	71,951	53.0	2,034,788	47.5
1934	870,801	43.0	80,745	45.7	70,326	38.1	809,146	54.5	8,403	44.9	29,243	34.2	69,613	53.2	1,938,277	48.0
1935	809,280	43.1	76,748	46.1	68,264	38.3	778,250	54.8	8,293	45.0	26,617	35.2	68,202	53.4	1,835,654	48.3
1936	767,648	43.5	69,978	46.7	63,897	38.5	754,893	55.2	8,196	44.8	25,688	35.4	67,793	53.8	1,758,093	48.8
1937	755,980	43.9	67,883	46.9	60,741	38.9	799,183	55.4	8,401	45.0	23,827	36.2	27,728	54.4	1,743,743	49.2
1938	733,314	44.2	64,841	47.1	58,688	39.1	783,699	55.6	8,139	45.0	23,205	36.3	27,711	54.6	1,699,597	49.4
1939	704,472	44.5	62,032	47.3	55,967	39.3	770,430	55.7	8,127	45.0	22,039	36.3	26,875	54.1	1,649,942	49.7
1940	705,366	44.8	60,785	47.7	54,529	39.5	790,825	56.0	8,036	45.3	21,732	36.9	12,301	50.9	1,653,574	50.0
1941	734,020	45.2	61,549	48.0	54,002	39.5	810,965	56.2	8,115	45.3	22,017	37.0	12,556	51.2	1,703,224	50.3
1942	754,322	45.5	64,583	48.6	53,853	39.6	830,065	56.3	8,455	46.1	21,958	36.8	12,190	51.4	1,745,426	50.5
1943	744,532	45.5	67,273	48.9	53,960	39.6	851,898	56.5	8,456	46.0	21,731	36.8	8,427	50.8	1,756,277	50.7
1944	745,465	45.8	67,541	49.1	54,382	39.5	863,503	56.4	8,415	46.1	21,378	36.9	8,835	49.7	1,769,519	50.8
1945	741,946	46.2	67,356	49.2	54,395	39.5	858,114	56.6	8,373	46.1	20,983	36.9	9,072	50.2	1,760,239	51.1
1946	728,463	46.3	65,977	49.3	53,099	39.5	857,334	56.8	8,349	46.1	20,612	37.0	9,174	49.4	1,743,008	51.2
1947	726,882	46.7	65,005	49.4	51,882	39.5	852,312	56.8	8,196	46.2	20,816	37.1	9,098	50.9	1,734,191	51.5
1948	734,872	47.1	63,988	49.6	49,872	39.6	873,738	57.2	8,089	46.3	20,210	37.1	8,754	51.4	1,759,523	51.9
1949	719,349	47.3	63,552	49.9	48,441	39.6	886,047	57.9	8,174	47.1	19,669	37.5	8,496	52.0	1,753,728	52.4
1950	714,568	47.6	64,886	50.4	46,334	39.7	859,030	58.0	7,729	47.4	19,076	37.6	9,608	52.8	1,721,231	52.6
1951	736,059	47.8	69,011	50.5	43,762	39.7	867,007	58.4	7,576	47.4	18,591	37.8	10,385	53.1	1,752,391	52.9
1952	735,123	48.1	70,846	50.5	42,585	39.5	873,233	58.8	7,282	47.6	19,065	38.1	10,799	53.1	1,758,933	53.2
1953	735,592	48.3	73,231	50.8	41,680	39.5	889,905	59.1	7,339	48.4	19,125	38.5	9,909	52.5	1,776,781	53.5
1954	719,918	48.4	74,541	51.3	39,644	39.7	863,310	59.3	6,929	48.9	19,260	38.8	12,420	52.9	1,736,022	53.8
1955	718,950	48.4	81,683	51.9	37,922	39.7	829,594	59.4	6,737	49.9	19,849	38.7	4,056	59.6	1,698,791	53.7
1956	727,659	48.7	85,340	51.4	36,830	39.7	828,196	59.9	6,461	50.1	20,010	39.0	2,332	70.5	1,706,828	54.0
1957	738,954	48.9	88,638	52.7	35,717	39.7	853,473	60.4	6,335	49.7	20,210	39.5	2,319	70.1	1,745,706	54.5
1958	722,732	NA	NA	NA	33,409	NA	852,352	NA	NA	NA	20,082	NA	NA	NA	1,725,723	54.8
1959 (June 1)	714,484	NA	NA	NA	32,479	NA	840,914	NA	NA	NA	18,127	NA	NA	NA	1,702,896	NA

NA - Not Available

Source: 1929-1957, "Statistics of Railways in the United States", Interstate Commerce Commission.
1958-1959, Car Service Division, Association of American Railroads.

Research Department - FNR
July 18, 1959

CLASS I RAILROADS

FREIGHT SERVICE - OPERATING STATISTICS

YEARS 1939 - 1958

	Ton-Miles (Millions)				Revenue Car Loadings (Thousands)		Car Miles (Thousands)(a)					
		Revenue					Loaded		Empty			
Year	Net	Number	Percent of Net	Revenue Tons Carried (Thousands)	Annual	Weekly Maximum	Number	Percent of Total	Number	Percent of Total	Total	Train Miles (Thousands)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1939	364,341	333,438	91.5	1,636,215	33,911	856	13,564,969	62.3	8,217,025	37.7	21,781,994	451,991
1940	405,578	373,253	92.0	1,843,290	36,358	838	14,699,023	61.8	9,081,658	38.2	23,780,681	481,892
1941	513,843	475,072	92.5	2,280,267	42,352	923	18,083,571	64.0	10,192,436	36.0	28,276,007	567,727
1942	681,501	637,984	93.6	2,796,920	42,771	909	21,442,458	62.8	12,693,049	37.2	24,135,507	666,437
1943	777,203	727,075	94.2	3,008,045	42,400	912	23,193,928	64.3	12,896,669	35.7	36,090,597	701,212
1944	785,202	737,246	93.9	3,005,798	43,208	916	24,087,991	65.8	12,531,812	34.2	36,619,803	698,761
1945	726,424	681,001	93.7	2,823,992	41,918	900	22,575,076	67.1	11,080,455	32.9	33,655,531	652,250
1946	632,578	591,982	93.6	2,602,186	41,341	942	20,249,139	67.0	9,962,515	33.0	30,211,654	590,413
1947	696,643	654,728	94.0	2,888,589	44,502	957	21,395,870	66.4	10,805,463	33.6	32,201,333	616,071
1948	679,088	637,917	94.0	2,847,897	42,719	931	20,651,602	65.7	10,803,360	34.3	31,454,962	584,671
1949	558,987	526,500	94.0	2,303,080	35,911	808	17,866,445	63.8	10,155,389	36.2	28,021,834	498,573
1950	621,305	588,578	94.7	2,570,153	38,903	891	19,644,438	66.0	10,139,511	34.0	29,783,949	514,971
1951	677,703	646,620	95.4	2,790,817	40,499	887	20,614,551	66.0	10,601,562	34.0	31,216,113	528,573
1952	642,850	614,754	95.6	2,626,187	37,985	881	19,826,704	64.7	10,798,220	35.3	30,624,924	502,891
1953	631,953	605,813	95.9	2,612,624	38,216	824	19,769,872	64.1	11,054,944	35.9	30,824,816	492,409
1954	567,537	549,259	96.8	2,314,919	33,915	746	18,152,123	63.1	10,631,221	36.9	28,783,344	447,122
1955	643,541	623,615	97.0	2,606,504	37,636	830	20,131,047	64.5	11,066,541	35.5	31,197,588	476,444
1956	664,768	647,077	97.3	2,705,264	37,845	832	20,250,677	64.1	11,344,319	35.9	31,594,996	475,561
1957	635,075	618,194	97.3	2,552,195	35,500	759	19,078,877	62.2	11,599,339	37.8	30,678,216	446,733
1958	565,274	551,668	97.6	2,204,200	30,206	696	17,188,489	61.3	10,876,567	38.7	28,059,056	400,420

(a) Excludes cabooses.

Source: Columns 2 through 5 and 8, 10, 12 and 13 - "Statistics of Railways in the United States," Interstate Commerce Commission.
Columns 6 and 7 - Association of American Railroads.

Research Department - PRR
July 16, 1959

CLASS I RAILROADS

CLASS I RAILROADS

FREIGHT SERVICES - OPERATING STATISTICS - AVERAGES

YEARS 1939 - 1958

Year (1)	Net Ton-Miles Per Serviceable Car-Day(a) (2)	Per Car (Tons) Load (3)	Per Car (Tons) Capacity (4)	Car-Miles per Active Car-Day (5)	Length of Haul per Ton of Freight(b) (Miles) (6)	Freight Train Load (Tons) (7)	Cars per Freight Train (8)	Freight Train Speed (M.P.H.) (9)	Net Ton-Miles per Train-Hour (10)	Turn around Time (Days) (11)
1939	610	26.9	49.7	41.3	351.21	813	48.5	16.7	13,450	16.18
1940	664	27.6	50.0	42.2	351.13	849	49.7	16.7	14,028	15.46
1941	795	28.5	50.3	45.7	368.54	915	50.3	16.5	14,930	13.96
1942	975	31.8	50.5	50.3	427.70	1,035	51.8	15.8	16,132	14.96
1943	1,092	33.3	50.7	52.0	469.07	1,116	52.1	15.4	16,997	15.31
1944	1,113	32.7	50.8	52.3	473.28	1,139	53.0	15.7	17,623	14.96
1945	1,066	32.2	51.1	49.7	458.14	1,129	52.2	15.7	17,482	15.00
1946	948	31.3	51.3	45.9	419.48	1,086	51.8	16.0	17,173	14.88
1947	1,057	32.6	51.5	49.0	467.82	1,146	52.9	16.0	18,126	13.67
1948	1,020	32.9	51.9	47.7	405.64	1,176	54.5	16.2	18,778	14.29
1949	859	31.4	52.4	44.9	412.02	1,138	56.8	16.9	19,024	16.95
1950	972	31.7	52.6	47.4	416.32	1,224	58.5	16.8	20,343	15.42
1951	1,028	33.0	52.9	47.5	419.99	1,300	59.8	17.0	21,760	15.35
1952	973	32.5	53.2	46.6	426.93	1,296	61.6	17.6	22,565	16.33
1953	958	32.1	53.5	47.7	420.66	1,301	63.2	18.2	23,443	16.26
1954	867	31.4	53.7	46.1	431.65	1,287	65.0	18.7	23,877	18.31
1955	1,000	32.1	53.7	48.7	429.75	1,374	66.2	18.6	25,314	16.24
1956	1,023	33.0	54.0	48.6	428.08	1,422	67.2	18.6	26,149	16.37
1957	975	33.4	54.5	47.5	429.20	1,439	69.3	18.8	26,833	17.43
1958	882	E 33.0	54.8	45.4	445.00	1,430	70.7	19.2	27,148	20.17

E - Estimated
(a) Including carload traffic, less-than-carload traffic and company freight.
(b) All railways as a system. Derived: revenue ton-miles divided by revenue tons carried.

Source: Association of American Railroads

Research Department - PnR
July 20, 1959

CLASS I RAILROADS, OTHER RAILROADS AND PULLMAN COMPANY

CLASSIFICATION OF PASSENGER TRAIN CARS

YEARS 1929 - 1958

December 31 (1)	Passenger Carrying Cars: Coach (2)	Combination Passenger (3)	Dining (4)	Parlor, Club, Lounge, Observation and Sleeping Combinations (5)	Sleeping (6)	Other (7)	Total (8)	Postal, Baggage and Express(a) (9)	Other (10)	Total Passenger Train Cars (11)
1929	25,424	5,472	1,687	1,623	8,254	NS	42,460	17,329	3,578	63,367
1930	25,178	5,270	1,760	1,723	8,516	NS	42,447	17,219	3,778	63,444
1931	24,255	5,143	1,743	1,617	8,267	NS	41,025	16,754	3,800	61,579
1932	23,421	5,032	1,704	1,605	8,067	NS	39,829	16,445	3,603	59,877
1933	22,218	4,697	1,642	1,451	7,403	NS	37,411	15,281	3,463	56,155
1934	20,763	4,333	1,555	1,419	7,356	NS	35,426	14,557	3,374	53,357
1935	19,384	4,052	1,476	1,365	6,950	NS	33,227	14,061	3,165	50,453
1936	18,893	3,925	1,434	1,332	6,963	NS	32,547	13,777	3,070	49,394
1937	18,585	3,539	1,576	1,707	6,865	435	32,707	16,005		48,712
1938	18,124	3,416	1,576	1,608	6,736	426	31,886	15,623		47,509
1939	17,827	3,279	1,551	1,473	6,362	411	30,903	15,126	INCLUDED	46,029
1940	17,470	3,207	1,536	1,370	6,320	405	30,308	14,916	IN	45,224
1941	17,490	3,115	1,539	1,223	6,625	361	30,353	15,044	COLUMN 9	45,397
1942	17,807	2,937	1,554	952	6,890	314	30,454	15,128		45,582
1943	17,929	2,879	1,569	805	6,981	999(b)	31,162	14,995		46,157
1944	17,842	2,777	1,568	786	6,971	1,951(b)	31,895	15,075		46,970
1945	17,668	2,748	1,552	634	6,562	2,689(b)	31,853	15,372		47,225
1946	17,654	2,692	1,549	817	7,241	534	30,487	15,398		45,885
1947	17,542	2,635	1,628	954	6,099	419(b)	29,277	15,853		45,130
1948	17,150	2,592	1,730	948	6,234	270	28,924	15,787		44,711
1949	16,806	2,482	1,803	931	5,847	269	28,138	15,675		43,813
1950	16,488	2,331	1,836	938	6,155	250	27,998	15,587		43,585
1951	15,856	2,188	1,784	954	6,183	249	27,214	15,388		42,602
1952	14,957	2,021	1,691	927	6,139	242	25,977	15,209		41,186
1953	14,460	1,879	1,617	876	5,527	264	24,623	15,067		39,690
1954	14,210	1,711	1,534	874	4,858	251	23,438	14,452		37,890
1955	13,543	1,438	1,639	851	4,789	380	22,640	14,254		36,894
1956	12,867	1,282	1,559	794	4,504	393	21,399	13,682		35,081
1957	12,328	1,150	1,474	749	4,169	353	20,223	13,311		33,534
1958	NA	NA	NA	NA	NA	NA	NA	NA		P 32,344

NS - Not seperated between passenger train cars, and passenger carrying cars prior to 1937.
NA - Not available
P - Preliminary

(a) Includes other non-passenger after 1937
(b) Includes Troop Sleeper and Kitchen Cars.

Source: 1929-1957, American Railway Car Institute.
1958 , Association of American Railroads.

Research Department - FHR
July 19, 1959

PENNSYLVANIA RAILROAD

CLASSIFICATION OF PASSENGER TRAIN CARS

PENNSYLVANIA RAILROAD

CLASSIFICATION OF PASSENGER TRAIN CARS

YEARS 1929 - 1958

	Passenger Carrying Cars							
December 31	Coach	Combination Passenger	Dining	Parlor, Club, Lounge, Observation and Sleeping Combinations	Sleeping	Total	Postal, Baggage and Express(a)	Total Passenger Train Cars
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1929	2,458	483	183	-	-	3,124	2,681	5,805
1930	2,576	507	192	-	-	3,275	2,632	5,907
1931	2,583	493	192	-	-	3,268	2,532	5,800
1932	2,583	493	192	-	-	3,268	2,521	5,789
1933	2,416	430	192	-	-	3,038	2,088	5,126
1934	2,414	427	192	-	-	3,033	2,075	5,108
1935	2,405	421	192	-	-	3,018	2,097	5,115
1936	2,399	412	192	-	-	3,003	2,171	5,174
1937	2,399	409	191	-	-	2,999	2,169	5,168
1938	2,383	423	192	-	-	2,998	2,168	5,166
1939	2,399	423	209	-	-	3,031	2,167	5,198
1940	2,307	410	215	-	-	2,932	2,224	5,156
1941	2,319	399	218	-	-	2,936	2,577	5,513
1942	2,464	345	221	-	-	3,030	2,570	5,600
1943	2,556	338	221	-	40	3,155	2,572	5,727
1944	2,559	334	221	-	40	3,154	2,571	5,725
1945	2,558	332	221	123	182	3,416	2,565	5,981
1946	2,489	337	221	125	182	3,354	2,557	5,911
1947	2,552	363	220	125	182	3,442	2,547	5,989
1948	2,499	363	238	128	648(c)	3,876	2,533	6,409
1949	2,446	350	263	4	77(d)	3,140	2,523	5,663
1950	2,303	318	253	4	14	2,952	2,523	5,475
1951	2,329	292	251	18	8	2,898	2,519	5,417
1952	2,022	227	238	13	1	2,501	2,466	4,967
1953	1,987	183	221	23	5	2,419	2,404	4,823
1954	1,940	163	221	33	45	2,402	2,171	4,573
1955	1,836	124	217	47	38	2,262	2,484	4,746
1956	1,666	79	212	123	52	2,132	2,246	4,378
1957	1,635	73	200	124	6	2,038	2,217	4,255
1958	1,632	71	197	124	12	2,036	2,205	4,241
1959 (July 1)	1,564	69	192	123	11	1,959	2,197	4,156

Note: Excludes sleeping cars leased to the Pullman Company.

(a) Includes dormitory cars.
(b) Includes other non-passenger carrying cars.
(c) Includes 456 used sleeping cars acquired in 1948 from the Pullman Company
(d) Excludes 720 Sleeping Cars and 125 Parlor Cars leased to the Pullman Company in 1949

Source: 1929- 1958, PRR Annual Reports to the Interstate Commerce Commission.
1959, Supervisor of Equipment Expenditures - PRR

Research Department - PRR
July 18, 1959

CLASS I RAILROADS AND PULLMAN COMPANY

PASSENGER TRAIN CARS - SELECTED STATISTICS

YEARS 1929 - 1958

	Passenger Carrying Cars - December 31st					Passenger Train Cars				
	Ownership			Average	Aggregate	Total Ownership			Bad Order (Monthly Average)	
Year	Class I	Pullman	Total	Seating Capacity	Seating Capacity	December 31	Retired	Installed	Number	Percent of Ownership
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1929	31,611	9,469	41,080	70	2,875,600	61,728	N.A.	N.A.	N.A.	N.A.
1930	31,385	9,801	41,186	70	2,883,020	61,931	N.A.	N.A.	N.A.	N.A.
1931	30,420	9,471	39,891	70	2,792,370	60,218	N.A.	N.A.	N.A.	N.A.
1932	29,531	9,267	38,798	71	2,754,658	58,620	1,345	58	N.A.	N.A.
1933	27,982	8,457	36,439	71	2,587,169	54,967	2,081	7	N.A.	N.A.
1934	26,117	8,452	34,569	72	2,488,968	52,297	2,318	270	N.A.	N.A.
1935	24,537	8,007	32,544	72	2,343,168	49,591	2,075	225	N.A.	N.A.
1936	23,915	7,998	31,913	73	2,329,649	48,607	988	159	N.A.	N.A.
1937	23,960	7,757	31,717	72	2,283,624	48,016	842	576	3,586	8.9
1938	23,379	7,578	30,957	72	2,228,904	46,887	1,009	275	3,544	8.9
1939	23,000	7,052	30,052	72	2,163,744	45,479	790	209	3,465	9.0
1940	22,594	6,910	29,504	72	2,124,288	44,727	754	154	3,020	8.0
1941	22,576	7,059	29,635	72	2,133,720	44,956	587	297	2,617	7.0
1942	22,681	7,134	29,815	72	2,146,680	45,185	838	273	1,950	5.2
1943	22,714	7,824	30,538	72	2,198,736	45,764	255	8	1,818	4.8
1944	22,523	8,751	31,274	72	2,251,728	46,588	223	104	1,978	5.2
1945	22,681	8,590	31,271	71	2,220,241	46,863	375	111	2,113	5.5
1946	22,741	7,281	30,022	70	2,101,540	45,637	521	481	2,344	6.0
1947	22,702	6,071	28,773	70	2,014,110	44,841	736	858	2,485	6.4
1948	23,135	5,305	28,440	67	1,905,480	44,447	803	951	2,665	6.7
1949	21,881	5,807	27,688	70	1,938,160	43,578	923	939	2,793	7.0
1950	21,356	6,226	27,582	69	1,903,158	43,372	1,190	1,078	3,053	7.7
1951	20,536	6,276	26,812	70	1,876,840	42,406	1,109	183	3,157	8.1
1952	19,358	6,244	25,602	69	1,766,538	41,011	1,680	195	2,964	7.9
1953	18,655	5,584	24,239	68	1,648,252	39,532	1,325	329	2,855	7.8
1954	18,237	4,855	23,092	68	1,570,256	37,768	1,367	351	2,470	6.9
1955	17,467	4,776	22,243	66	1,468,038	36,871	1,586	412	2,495	7.4
1956	16,668	4,264	20,932	66	1,381,512	34,981	1,846	391	2,189	6.8
1957	15,837	3,970	19,807	66	1,307,262	33,443	1,313	232	2,093	6.7
1958 P	15,571	3,006	18,577	66	1,226,082	32,344	2,879	148	2,425	8.1
1959 (April 31) (a)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	2,882	9.8

N.A. Not available
P Preliminary
(a) Columns 10 and 11, fours months ended April 31.

Source: Columns 2 to 9 - Association of American Railroads
Column 10 - 1929-1959, Statement M-240 (OS-F), Interstate Commerce Commission.

Research Department - FHH
July 23, 1959

PENNSYLVANIA RAILROAD

PASSENGER TRAIN CARS - SELECTED STATISTICS

YEARS 1929 - 1958

PENNSYLVANIA RAILROAD

PASSENGER TRAIN CARS - SELECTED STATISTICS

YEARS 1929 - 1958

	Passenger Carrying Cars			Passenger Train Cars				
							Bad Order (Monthly Average)	
Year	Ownership December 31	Average Seating Capacity	Aggregate Seating Capacity	Ownership December 31	Retired	Installed	Number	Percent of Ownership
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1929	3,124	69.9	218,473	5,805	871	652	N.A.	N.A.
1930	3,275	69.6	227,803	5,907	26	128	N.A.	N.A.
1931	3,268	69.6	227,542	5,800	108	1	N.A.	N.A.
1932	3,268	69.7	227,681	5,789	11	-	N.A.	N.A.
1933	3,038	69.8	212,123	5,126	665	2	N.A.	N.A.
1934	3,033	69.8	211,705	5,108	18	-	N.A.	N.A.
1935	3,018	69.8	210,641	5,115	18	25	N.A.	N.A.
1936	3,003	69.7	209,269	5,174	41	100	358	7.0
1937	2,999	99.5	208,304	5,168	7	1	313	6.1
1938	2,998	69.4	208,125	5,166	3	1	293	5.7
1939	3,031	68.6	207,935	5,198	1	33	362	7.0
1940	2,932	68.1	199,756	5,156	57	15	346	6.7
1941	2,936	67.9	199,375	5,513	-	357	310	5.9
1942	3,030	68.6	207,868	5,600	2	89	254	4.6
1943	3,155	68.5	216,234	5,727	5	132	317	5.6
1944	3,154	68.5	216,128	5,725	2	-	395	6.6
1945	3,416	65.2	222,567	5,981	9	265	435	7.1
1946	3,354	64.7	217,107	5,911	90	20	466	7.3
1947	3,442	64.1	220,904	5,989	20	98	494	7.8
1948	3,876(a)	58.7	227,438	6,409	110	530	580	9.1
1949	3,140(b)	64.6	202,695	5,663	926	180	781	11.3
1950	2,952	65.2	192,471	5,475	221	33	936	13.6
1951	2,898	68.1	197,489	5,417	105	47	958	14.2
1952	2,501	63.5	158,789	4,967	467	17	863	13.3
1953	2,419	63.5	153,546	4,823	144	-	859	13.2
1954	2,402	62.6	150,476	4,573	250	-	675	13.5
1955	2,262	61.9	139,916	4,746	237	-	800	16.2
1956	2,132	60.0	127,878	4,378	376	8	530	11.8
1957	2,038	60.9	124.071	4,255	123	-	478	11.0
1958	2,036	60.7	118,961	4,241	48	34(c)	760	17.6
1959	1,959(d)	N.A.	N.A.	4,156(c)	87	2	1,073(e)	25.9(e)

N.A. Not available
(a) Includes 456 used sleeping cars acquired in 1948 from the Pullman Company
(b) Excludes 720 sleeping cars and 125 parlor cars leased to the Pullman Company in 1949
(c) Includes 28 Hudson and Manhattan cars and 6 Pioneer III cars.
(d) July 1.
(e) Five months ended May 31.

Source: 1929-1958 - Columns 2, 3, 4 and 5 - PRR Annual Reports to the Interstate Commerce Commission.
Columns 6 and 7 - Supervisor of Equipment Expenditures - PRR
Columns 8 and 9. - PRR "QS-F" Statements to the Interstate Commerce Commission
1959 - Columns 2 and 5 - Supervisor of Equipment Expenditures - PRR
Columns 8 and 9 - PRR "QS-F" Statements to the Interstate Commerce Commission.

Research Department - PRR
July 21, 1959

CLASS I RAILROADS

PASSENGER SERVICE - OPERATING STATISTICS - AVERAGES

YEARS 1939 - 1959

Year (1)	Journey Per Passenger (2)	Passengers Per Car (3)	Passengers Per Train (4)	Cars Per Train (5)	Miles Per Active Locomotive Day (6)	Passenger Train Speed (7)	Car Miles Per Train Hour (8)	Passenger Miles Per Train Hour (9)
1939	50.3	13.4	58.0	8.1	184.2	35.4	262.0	2,049.3
1940	52.5	13.8	60.7	8.2	190.8	36.0	268.4	2,171.9
1941	60.5	15.8	73.2	8.5	195.6	36.2	282.5	2,645.6
1942	80.4	23.1	125.5	9.2	206.8	36.9	303.9	4,475.4
1943	99.6	31.1	189.5	10.0	220.9	35.7	324.7	6,579.8
1944	105.0	31.9	200.7	10.3	222.9	35.8	337.0	6,975.0
1945	102.9	30.2	190.5	10.4	226.9	35.7	339.9	6,605.5
1946	81.9	24.5	144.3	10.1	221.8	36.7	337.8	5,122.9
1947	65.3	21.0	110.1	9.6	219.0	37.5	327.3	4,000.3
1948	64.1	19.4	101.1	9.7	220.9	38.1	336.4	3,709.6
1949	63.3	18.0	92.3	9.9	228.5	38.6	341.2	3,417.0
1950	65.3	17.0	88.8	10.1	237.2	39.0	354.1	3,322.5
1951	71.5	18.1	97.5	10.2	247.6	39.2	362.0	3,669.6
1952	72.4	18.1	98.5	10.4	266.1	39.9	374.8	3,783.4
1953	69.3	17.7	95.0	10.4	287.9	40.7	382.1	3,711.7
1954	66.7	17.4	92.3	10.3	304.8	41.0	383.6	3,648.2
1955	66.0	17.6	95.5	10.5	312.7	41.7	392.6	3,800.3
1956	65.8	18.2	97.2	10.6	326.5	41.9	396.9	3,886.0
1957	63.1	18.2	94.2	10.5	339.2	40.2	391.9	3,783.3
1958	61.2	18.7	94.4	10.6	335.0	40.2	394.1	3,793.4
1959 March(a)	NA	NA	NA	10.6	330.9	40.0	394.3	NA

NA - Not Available
(a) Three months ended March 31.

Source: 1939-1957, "Railroad Transportation", Association of American Railroads.
1958-1959, "OS" Statements for Class I Railroads, Interstate Commerce Commission.

Research Department - PRR
July 19, 1959

43755 O—59——33

PENNSYLVANIA RAILROAD

PASSENGER SERVICE - OPERATING STATISTICS - AVERAGES

YEARS 1939 - 1959

Year (1)	Journey Per Passenger (2)	Passengers Per Car (3)	Passengers Per Train (4)	Cars Per Train (5)	Miles Per Active Locomotive Day (6)	Passenger Train Speed (7)	Car Miles Per Train Hour (8)	Passenger Miles Per Train Hour (9)
1939	53.0	14.2	76.9	8.7	203.7	40.6	353.6	3,119.9
1940	53.7	15.1	82.6	8.9	210.3	41.0	364.5	3,390.5
1941	58.3	17.1	99.5	9.3	214.2	41.7	388.7	4,148.3
1942	68.6	25.3	160.3	9.7	222.1	41.7	405.2	6,691.3
1943	77.3	33.8	224.7	10.0	235.7	41.5	417.7	9,315.8
1944	79.8	33.3	232.4	10.4	238.0	42.0	436.0	9,768.4
1945	80.6	32.5	223.5	10.3	235.8	41.3	425.5	9,229.8
1946	72.7	26.8	180.6	10.4	218.2	41.6	429.8	7,518.9
1947	60.2	22.5	148.2	10.5	205.9	41.7	437.6	6,181.8
1948	60.2	20.8	136.3	10.9	214.5	42.4	460.4	5,778.1
1949	58.2	19.2	125.3	11.1	224.2	43.6	483.8	5,468.3
1950	58.2	18.1	117.4	11.2	229.1	43.8	488.6	5,136.1
1951	63.1	19.2	129.6	11.3	227.6	40.0	496.0	5,697.8
1952	65.3	19.0	133.8	11.8	229.1	44.8	528.3	5,987.7
1953	62.9	18.7	130.6	12.0	258.9	44.6	537.0	5,824.0
1954	60.0	18.3	126.0	12.0	229.3	44.3	533.0	5,583.8
1955	59.4	18.1	124.2	12.2	309.5	44.6	541.3	5,532.1
1956	59.6	18.5	129.6	12.4	295.3	43.7	539.3	5,657.3
1957	58.5	18.6	130.2	12.2	292.7	43.1	524.7	5,603.5
1958	54.7	19.0	127.1	12.4	278.5	42.5	525.7	5,403.5
1959 May 31(a)	NA	NA	NA	12.4	266.4	41.6	516.3	NA

NA - Not Available
(a) Five months ended May 31.

Source: Column 2, PRR Annual Reports to the Interstate Commerce Commission.
Columns 4 and 5, PRR Annual Reports to the Stockholders.
Columns 3, 6, 7, 8 and 9, and all data for 1959 (Five months ended May 31), PRR "OS" Statements to the Interstate Commerce Commission.

Research Department - PRR
July 19, 1959

Page 46. Map, Pennsylvania Railroad, passenger-carrying trains, traffic density chart showing service Monday through Friday, 1929. (Too large for readable reproduction in page size. Copy on file in committee office.)

Page 47. Same as map on page 46 showing service in 1959. Not reproduced here for same reason.

Page 48. Map, Pennsylvania Railroad, suburban service, passenger-carrying trains, traffic density chart showing service Monday through Friday, 1929. (Too large for readable reproduction in page size. Copy on file in committee office.)

Page 49. Same as map on page 47 showing service for 1959. Not reproduced here for the same reason.

COMMUTATION TRAFFIC-CLASS I RAILROADS AND PENNSYLVANIA RAILROAD
YEARS 1929 - 1958 (Index 1944 - 100)
(Thousands)

Year	Commutation Passengers Carried				Commutation Passenger-Miles			
	Class I		Pennsylvania Railroad		Class I		Pennsylvania Railroad	
	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1929	457,617	144.0	57,740	146.4	6,848,473	129.1	740,736	125.0
1930	438,688	138.0	52,835	134.0	6,669,110	124.8	676,756	114.1
1931	386,349	121.5	41,250	104.6	6,017,959	112.6	528,451	89.1
1932	315,462	99.2	31,511	79.9	4,985,708	93.3	403,396	68.0
1933	271,584	85.4	25,912	65.7	4,308,206	80.6	331,762	56.0
1934	262,825	82.7	25,562	64.8	4,163,038	78.0	327,628	55.2
1935	259,099	81.5	26,440	67.0	4,111,626	77.0	339,042	57.2
1936	259,199	81.5	26,539	67.3	4,191,323	78.4	357,890	60.3
1937	245,824	77.3	24,773	62.8	4,116,378	77.0	357,115	60.2
1938	227,412	71.5	23,304	59.1	3,932,921	73.6	345,443	58.2
1939	231,126	72.7	24,736	62.7	4,012,419	75.1	370,248	62.4
1940	229,266	72.1	25,136	63.7	3,996,505	74.8	381,207	64.1
1941	232,456	73.1	26,411	67.0	4,087,821	76.5	401,200	67.6
1942	286,225	90.0	34,096	86.4	4,916,760	92.0	519,606	87.6
1943	312,246	98.2	39,710	100.7	5,260,985	98.4	591,528	99.7
1944	317,918	100.0	39,448	100.0	5,344,014	100.0	593,056	100.0
1945	322,734	101.5	38,876	98.6	5,417,587	101.4	587,963	99.1
1946	340,670	107.2	37,809	95.8	5,857,467	109.6	606,089	102.2
1947	344,604	108.4	39,498	100.1	6,008,207	112.4	644,490	108.7
1948	332,196	104.5	37,044	94.0	5,855,443	109.6	611,931	103.2
1949	308,512	97.0	34,889	88.4	5,477,775	102.5	586,543	99.0
1950	277,102	87.2	31,904	80.9	4,984,636	93.3	546,454	92.1
1951	269,464	84.8	30,391	77.0	4,869,721	91.1	515,343	86.9
1952	260,463	82.0	27,955	70.9	4,755,158	89.0	497,113	83.8
1953	255,829	80.5	26,222	66.5	4,757,152	89.0	462,698	78.0
1954	249,069	78.3	24,737	62.7	4,738,558	88.7	433,783	73.1
1955	247,759	78.0	24,074	61.0	4,776,102	89.4	420,653	71.0
1956	247,061	77.7	23,657	60.0	4,841,101	90.6	415,268	70.0
1957	243,881	76.7	23,573	59.8	4,828,255	90.3	419,458	70.7
1958	240,190	75.6	22,920	58.1	4,794,007	89.7	405,223	68.3

Source: Class I - "Statistics of Railways in the United States", Interstate Commerce Commission
PRR - Annual Reports to the Interstate Commerce Commission

Research Department - PRR
July 16, 1959

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PENNSYLVANIA RAILROAD

PHILADELPHIA SUBURBAN SERVICE

NUMBER OF REVENUE PASSENGERS

YEARS 1929-1958
(Index 1944 = 100)

(Thousands)

	Number of Revenue Passengers Between Philadelphia and:-											
	Paoli		Chestnut Hill		Wilmington		Media-West Chester		Norristown		Trenton	
Year	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	5,304	73.4	3,276	95.3	3,882	44.8	2,401	70.4				
1930	4,979	68.9	2,979	86.7	4,546	52.5	2,412	69.0				
1931	4,347	60.1	2,392	69.6	3,601	41.6	2,136	61.1	NOT AVAILABLE			
1932	3,618	50.1	1,948	56.7	2,829	32.7	1,844	52.7				
1933	3,356	46.4	1,869	48.6	2,468	28.5	1,649	47.2	788	59.3		
1934	3,348	46.3	1,652	48.1	2,697	31.2	1,665	47.6	767	57.7		
1935	3,371	46.7	1,657	48.2	2,579	29.8	1,705	48.8	820	61.7		
1936	3,507	48.5	1,757	51.1	2,756	31.8	1,858	53.1	837	63.0	NOT AVAILABLE	
1937	3,628	50.2	1,860	54.1	3,093	35.7	2,026	58.0	857	64.5		
1938	3,641	50.4	1,824	53.1	2,878	33.2	1,995	57.1	797	60.0		
1939	3,478	48.1	1,642	47.8	2,811	32.5	2,041	58.4	757	57.0		
1940	3,735	51.7	1,675	48.7	3,000	34.7	2,156	61.7	765	57.6		
1941	4,076	56.4	1,813	52.8	3,552	41.0	2,262	64.7	814	61.2		
1942	5,876	81.3	2,583	75.2	6,026	69.6	2,804	80.2	1,119	84.2		
1943	7,646	105.8	3,350	97.5	9,173	106.0	3,354	95.9	1,349	101.5		
1944	7,224	100.0	3,436	100.0	8,657	100.0	3,496	100.0	1,329	100.0		
1945	7,084	98.1	3,486	101.5	8,341	96.3	3,539	101.2	1,333	100.3		
1946	7,026	97.3	3,378	98.3	6,806	78.6	3,775	108.2	1,294	97.4	255	100.0
1947	6,638	91.8	3,059	89.0	6,585	76.1	3,737	106.9	1,236	93.0	244	95.6
1948	5,951	82.3	2,627	76.5	5,801	67.0	3,572	102.2	1,116	84.0	217	85.0
1949	5,653	78.2	2,571	74.8	4,947	57.1	3,759	107.5	1,103	83.0	199	78.0
1950	5,133	71.5	2,213	64.4	4,025	46.5	3,121	89.3	952	71.6	162	63.5
1951	4,880	67.6	1,990	57.9	3,735	43.1	3,104	88.8	851	64.3	162	63.5
1952	4,770	66.0	1,800	52.4	3,371	38.9	3,111	89.0	670	50.4	152	59.6
1953	5,115	70.8	1,713	51.3	3,243	37.5	3,489	99.8	613	46.1	213	83.5
1954	5,476	75.8	1,687	49.1	3,087	35.7	3,786	108.3	435	32.7	321	125.5
1955	5,749	79.6	1,692	49.2	3,038	35.1	4,022	115.0	460	34.6	364	142.7
1956	5,918	81.9	1,731	50.4	3,058	35.3	4,064	116.8	431	32.4	391	153.3
1957	5,828	80.7	1,689	49.2	2,903	33.6	3,933	112.5	448	33.7	474	185.9
1958	5,805	80.4	1,598	46.5	2,765	31.9	3,697	105.8	403	30.3	432	169.4

Source: General Manager, Passenger Sales, P.R.R.

Research Department - PRR
July 19, 1959

Research Department - PRR
July 16, 1959

Source: Exhibit 1 - Annual Reports to the Interstate Commerce Commission
PRR - Annual Reports to the Interstate Commerce Commission

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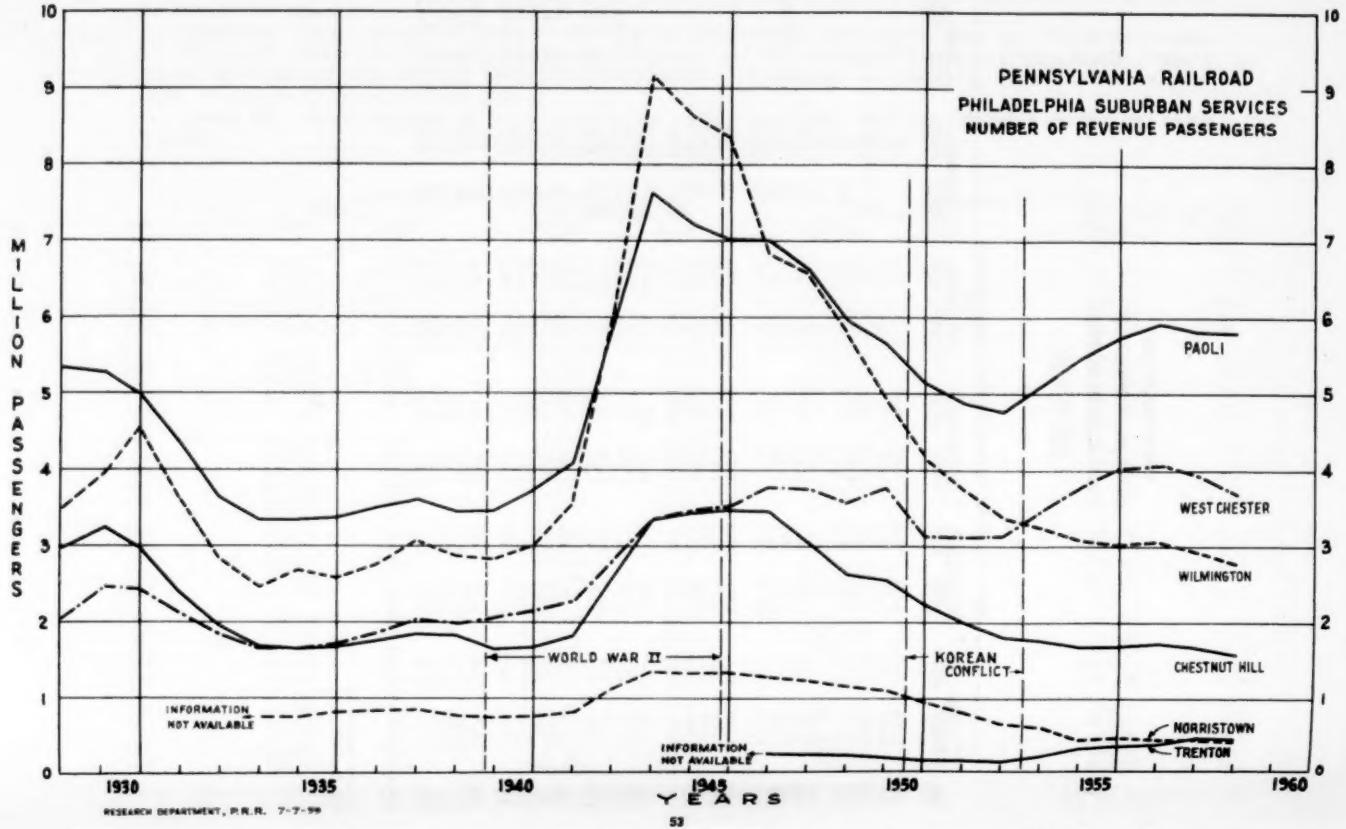
PENNSYLVANIA RAILROAD
PHILADELPHIA SUBURBAN SERVICES
NUMBER OF REVENUE PASSENGERS
MILLION PASSENGERS
YEARS
PAOLI
WEST CHESTER
WILMINGTON
CHESTNUT HILL
NORRISTOWN
TRENTON
WORLD WAR II
KOREAN CONFLICT
INFORMATION NOT AVAILABLE
INFORMATION NOT AVAILABLE
RESEARCH DEPARTMENT, P.R.R. 7-7-59
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RESEARCH DEPARTMENT, P.R.R. 7-7-59

YEARS

1950 1955 1960

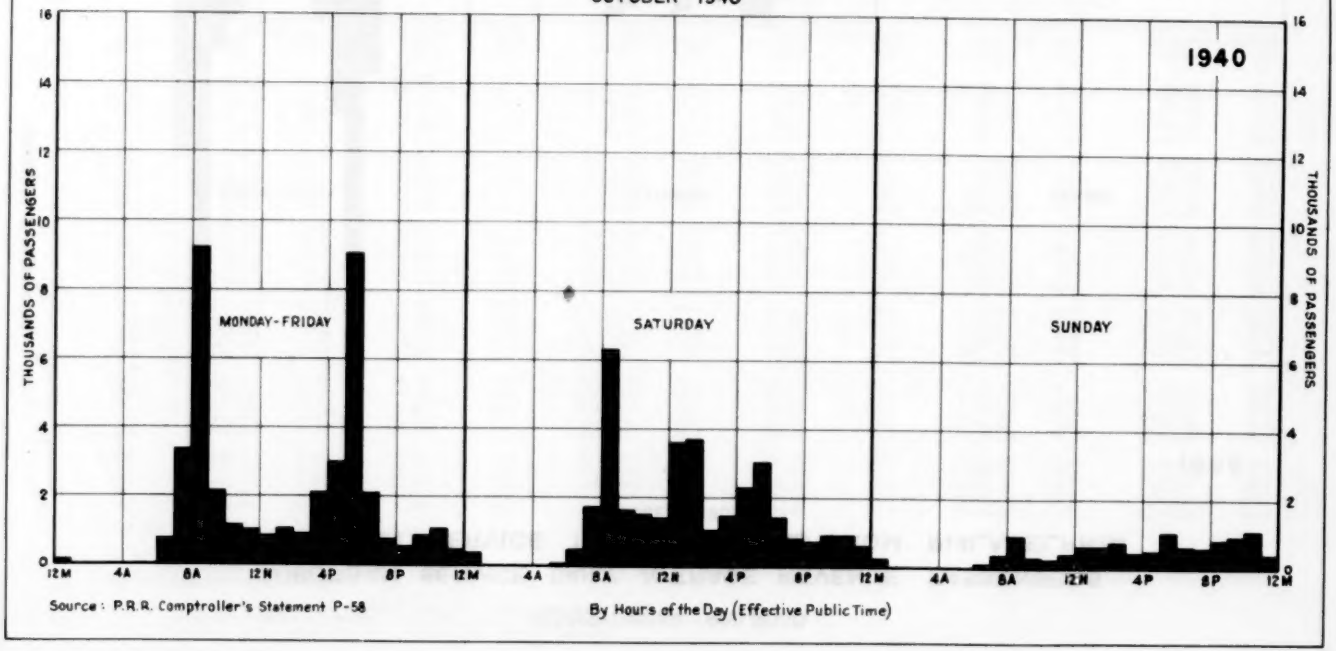
53

PENNSYLVANIA RAILROAD

SUBURBAN SERVICE DAILY AVERAGE REVENUE PASSENGERS

ON SUBURBAN SERVICE TRAINS INTO AND FROM PHILADELPHIA

OCTOBER 1940



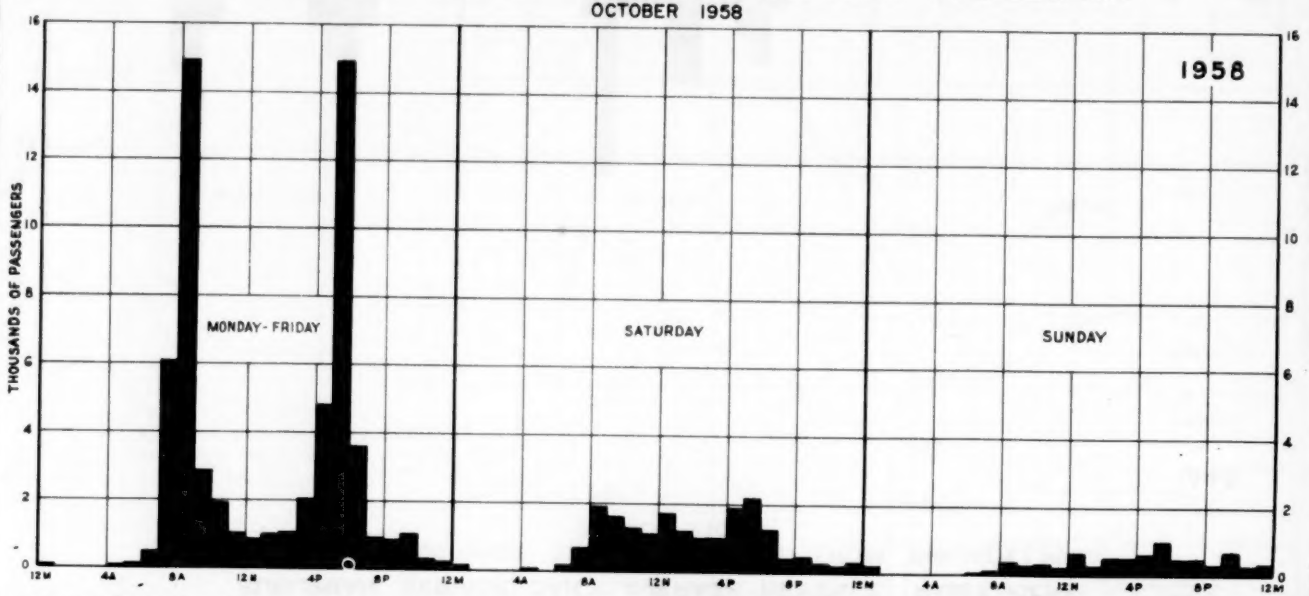
Source : P.R.R. Comptroller's Statement P-58

By Hours of the Day (Effective Public Time)

54

PENNSYLVANIA RAILROAD

SUBURBAN SERVICE DAILY AVERAGE REVENUE PASSENGERS
ON SUBURBAN SERVICE TRAINS INTO AND FROM PHILADELPHIA
OCTOBER 1958



Source : P.R.R. Comptroller's Statement P-58

AVERAGE NUMBER OF EMPLOYEES

AVERAGE NUMBER OF EMPLOYEES
RELATED TO GROSS TONS HANDLED
CLASS I AND PENNSYLVANIA RAILROADS

YEARS 1929 - 1959
(Index 1944 = 100)

Year	Average Number of Employees (a)				Gross Ton Miles (Millions)				Gross Ton Miles per Employee			
	Class I		Pennsylvania Railroad		Class I		Pennsylvania Railroad		Class I		Pennsylvania Railroad	
	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index
	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	1,686,769	119.3	171,589	104.5	1,661,762	71.7	174,430	75.2	985,175	60.1	1,016,557	72.0
1930	1,510,688	106.9	156,734	95.4	1,494,908	64.5	155,025	66.8	989,554	60.4	989,096	70.1
1931	1,278,175	90.4	138,860	84.5	1,275,644	55.1	132,653	57.2	998,020	61.0	955,300	67.7
1932	1,048,568	74.2	115,860	70.5	1,024,740	44.2	105,608	45.5	977,276	59.6	911,513	64.6
1933	970,893	68.7	110,106	67.0	1,032,987	44.6	106,309	45.8	1,063,956	65.0	965,515	68.4
1934	1,008,995	71.4	115,767	70.5	1,107,150	47.8	110,023	47.4	1,097,280	67.0	950,383	67.3
1935	994,078	70.3	107,912	65.7	1,141,033	49.3	113,509	49.0	1,147,830	70.0	1,051,866	74.5
1936	1,065,970	75.4	115,183	70.1	1,314,487	56.7	132,368	57.1	1,233,137	75.3	1,149,197	81.4
1937	1,115,077	78.9	122,098	74.3	1,379,929	59.6	139,708	60.2	1,237,519	75.5	1,143,519	81.0
1938	939,505	66.5	89,216	54.3	1,189,747	51.4	112,010	48.3	1,266,355	77.3	1,255,492	88.0
1939	987,943	69.9	99,924	60.8	1,300,886	56.2	130,179	56.1	1,316,762	80.4	1,302,780	92.3
1940	1,026,956	72.6	109,412	66.6	1,406,055	60.7	143,883	62.0	1,369,148	83.6	1,315,056	93.1
1941	1,139,753	80.6	131,892	80.3	1,607,855	69.4	176,373	76.0	1,410,705	86.1	1,337,253	94.7
1942	1,271,077	90.0	151,604	92.3	2,096,505	88.8	215,329	92.8	1,617,923	98.7	1,420,338	100.6
1943	1,355,114	95.9	141,540	98.3	2,262,514	97.7	227,287	98.0	1,669,612	101.9	1,607,001	99.7
1944	1,413,672	100.0	164,255	100.0	2,316,577	100.0	231,918	100.0	1,638,695	100.0	1,411,938	100.0
1945	1,420,266	100.5	161,436	98.3	2,189,472	94.5	212,225	91.5	1,541,593	94.1	1,314,607	93.1
1946	1,358,838	96.1	151,161	92.0	1,960,714	84.6	195,514	84.3	1,442,934	88.1	1,293,415	91.6
1947	1,351,961	95.6	148,521	90.4	2,040,861	88.1	194,527	83.9	1,509,556	92.1	1,309,760	92.8
1948	1,326,906	93.9	138,020	84.0	1,995,212	86.1	186,188	80.3	1,503,657	91.8	1,348,992	95.5
1949	1,191,444	84.3	116,743	71.1	1,750,593	75.6	155,944	67.2	1,469,304	89.7	1,335,788	94.6
1950	1,228,784	86.4	124,629	80.1	1,854,591	80.1	159,732	68.9	1,519,180	92.7	1,281,659	90.8
1951	1,276,000	90.3	137,604	83.8	1,951,742	84.3	169,671	73.2	1,529,578	93.3	1,233,038	87.3
1952	1,226,863	86.8	125,924	76.7	1,901,864	82.1	160,086	69.0	1,550,437	94.6	1,271,290	90.0
1953	1,206,312	85.3	126,359	77.0	1,872,713	80.8	158,583	68.4	1,552,428	94.7	1,552,428	88.9
1954	1,064,705	75.3	100,544	61.2	1,727,257	74.6	139,220	60.0	1,622,287	99.0	1,384,667	98.1
1955	1,058,216	74.9	106,195	64.7	1,862,155	80.4	153,699	66.3	1,759,712	107.4	1,447,328	102.5
1956	1,042,664	73.8	103,624	63.1	1,891,008	81.6	157,589	68.0	1,813,631	110.7	1,520,777	107.7
1957	986,001	69.7	98,853	60.2	1,814,506	78.3	150,594	65.0	1,840,268	112.3	1,523,413	107.9
1958	840,575	59.5	80,727	49.1	1,649,489	71.2	128,787	55.5	1,962,334	119.7	1,595,339	113.0
1959 June 15	850,250	60.1	84,507	51.4	NA		NA		NA		NA	

NA Not Available

(a) Including locomotives and tenders.

Sources: Columns 2 and 4: Interstate Commerce Commission - Monthly statements M-300.
Column 6: "Statistics of Railways in the United States" - Interstate Commerce Commission.
Column 8: P.R.R. Annual Reports to the Interstate Commerce Commission.

Research Department - PRR
July 20, 1959

UNITED STATES LABOR FORCE AND CLASS I RAILROAD EMPLOYMENT

MARS 1939 - 1959
(Index 1942 = 100)
(Thousands)

Year (1)	United States Labor Force Distribution										Class I Railroads Employment	
	Employed						Unemployed		Total			
	Civilian		Armed Forces		Total							
	Number (2)	Index (3)	Number (4)	Index (5)	Number (6)	Index (7)	Number (8)	Index (9)	Number (10)	Index (11)	Number (12)	Index (13)
A Number												
1939	45,750	84.8	370	3.2	46,120	70.6	9,480	1415.0	55,600	84.2	988	69.9
1940	47,520	88.1	340	4.7	48,060	73.5	8,120	1212.0	56,180	85.1	1,027	72.6
1941	50,350	93.3	1,620	14.2	51,970	79.5	5,560	829.8	57,530	87.1	1,160	82.0
1942	53,750	99.6	3,970	34.8	57,720	88.3	2,660	397.0	60,380	91.4	1,271	90.0
1943	54,470	101.0	9,020	79.1	63,490	97.1	1,070	159.7	64,560	97.8	1,355	95.9
1944	53,960	100.0	11,410	100.0	65,370	100.0	670	100.0	66,040	100.0	1,414	100.0
1945	52,820	97.9	11,430	100.2	64,250	98.3	1,040	155.2	65,290	98.9	1,420	100.5
1946	55,250	102.4	3,450	30.2	58,700	89.8	2,270	338.8	60,970	92.3	1,359	96.1
1947	58,026	107.5	1,390	12.0	59,416	91.2	2,122	319.7	61,758	93.5	1,352	95.6
1948	59,378	110.0	1,456	12.8	60,834	93.1	2,044	308.1	62,898	95.2	1,327	93.9
1949	58,710	108.8	1,616	14.2	60,326	92.3	3,395	506.7	63,721	96.5	1,191	84.3
1950	59,957	111.1	1,650	14.5	61,607	94.2	3,142	469.0	64,749	98.0	1,221	86.4
1951	61,905	113.1	3,098	27.2	64,103	98.1	1,879	280.4	65,982	99.9	1,274	90.3
1952	61,293	113.6	3,610	31.6	64,903	99.3	1,673	249.7	66,576	100.8	1,227	86.8
1953	62,223	115.3	3,547	31.1	65,760	100.6	1,602	239.1	67,362	102.0	1,206	85.3
1954	61,239	113.5	3,330	29.4	64,589	98.8	3,230	482.1	67,819	102.7	1,085	76.3
1955	63,193	117.1	3,069	26.7	66,262	101.3	2,654	396.1	68,898	104.3	1,098	76.9
1956	64,979	120.4	2,857	25.0	67,836	103.8	2,551	380.7	70,387	106.6	1,043	73.8
1957	65,011	120.5	2,799	24.5	67,810	103.7	2,934	438.2	70,744	107.1	986	69.7
1958	63,966	118.2	2,637	23.1	66,603	101.9	4,681	698.7	71,284	108.0	843	59.5
1959 - May	66,016	122.3	2,550	22.3	68,566	104.9	3,389	505.8	71,955	109.0	840	59.4
B Percentage												
1939	82.3		0.7		83.0		17.0		100.0		1.8	
1940	84.6		0.5		85.5		14.5		100.0		1.8	
1941	87.5		22.8		90.3		9.7		100.0		2.0	
1942	89.0		6.6		95.6		4.4		100.0		2.1	
1943	84.3		14.0		98.3		1.7		100.0		2.1	
1944	81.7		17.3		99.0		1.0		100.0		2.1	
1945	80.9		17.5		98.4		11.6		100.0		2.2	
1946	90.6		5.7		96.3		3.7		100.0		2.2	
1947	94.0		2.5		96.5		3.5		100.0		2.2	
1948	96.4		2.3		98.7		3.3		100.0		2.1	
1949	92.1		2.6		94.7		5.3		100.0		1.9	
1950	92.6		2.5		95.1		4.9		100.0		1.9	
1951	92.5		4.7		97.2		2.8		100.0		1.9	
1952	92.1		5.4		97.5		2.5		100.0		1.8	
1953	92.3		5.3		97.6		2.4		100.0		1.8	
1954	90.3		4.9		95.2		4.8		100.0		1.6	
1955	91.7		4.4		96.1		3.9		100.0		1.5	
1956	92.3		4.1		96.4		3.6		100.0		1.5	
1957	91.9		4.0		95.9		4.1		100.0		1.4	
1958	89.7		3.7		93.4		6.6		100.0		1.2	
1959 - May	91.7		3.6		95.8		4.7		100.0		1.2	

Source: Columns 2 through 11: Estimates for 1939 - U. S. Bureau of Labor Statistics, Estimates for 1940 - 1959 - U. S. Bureau of Census.
Column 12 - "Statistics of Railways in the United States", Interstate Commerce Commission.

Research Department - PRR
July 13, 1959

PENNSYLVANIA RAILROAD

LABOR TURNOVER

YEARS 1929 - 1958

Year (1)	Average Number of Employees (2)	Employments		Some Specific Causes for Employments		
		Total (3)	Percent of Average Force (4)	Left Service (5)	Retirements (6)	Furlough for Military Service(a) (7)
1929	171,589	95,191	55.5	88,581	1,349	-
1930	155,734	46,877	29.9	44,776	1,238	-
1931	138,860	17,996	13.0	30,427	1,449	-
1932	115,860	6,197	5.4	24,422	1,234	-
1933	110,106	13,347	12.1	18,206	817	-
1934	115,767	21,268	18.4	13,580	1,646	-
1935	107,912	10,130	9.4	18,327	1,336	-
1936	115,183	40,440	35.1	24,691	1,375	-
1937	122,098	28,822	23.6	21,510	2,855	-
1938	89,216	7,337	8.2	20,474	6,387	-
1939	99,924	33,739	33.8	16,078	2,378	-
1940	109,412	26,956	24.6	17,053	2,654	-
1941	131,892	82,466	62.5	40,455	2,106	3,882
1942	151,604	130,531	86.1	75,582	1,400	20,196
1943	161,540	122,720	76.0	83,640	1,764	16,525
1944	164,255	87,277	53.1	76,287	1,886	7,524
1945	161,436	71,966	44.6	58,425	2,416	4,267
1946	151,161	46,475	30.7	57,820	2,986	-
1947	148,521	48,287	32.5	55,798	4,546	-
1948	138,020	44,009	31.9	48,882	2,995	-
1949	116,743	19,419	16.6	75,312	3,707	-
1950	124,620	43,754	35.1	59,593	3,745	-
1951	137,604	41,738	30.3	37,698	3,051	-
1952	125,074	30,135	23.9	24,919	3,551	-
1953	126,359	29,974	23.7	36,774	3,388	-
1954	100,544	4,088	4.1	22,121	3,499	-
1955	106,195	30,116	28.4	27,901	3,739	-
1956	103,624	12,631	12.2	15,137	3,671	-
1957	98,853	8,543	8.6	11,656	4,003	-
1958	80,727	2,856	3.5	13,953	4,324	-

(a) Data kept only during World War II.

Source: Column 2 - - PRR Annual Reports to Interstate Commerce Commission.
Column 7 - - Personnel Department, PRR.
Columns 3, 5 & 6 - Manager, Employee Benefits, PRR.

Research Department - PRR
July 15, 1959

PENNSYLVANIA RAILROAD

INCREASING PERCENTAGE OF SKILLED EMPLOYEES

ILLUSTRATED BY TYPICAL CLASSIFICATIONS OF EACH GROUP

SELECTED YEARS

1929 to DATE

Classification (1)	Average Number of Employees						Percent of Group						Percent of Total					
	1929 (2)	1939 (3)	1944 (4)	1955 (5)	1958 (6)	May 1959 (7)	1929 (8)	1939 (9)	1944 (10)	1955 (11)	1958 (12)	May 1959 (13)	1929 (14)	1939 (15)	1944 (16)	1955 (17)	1958 (18)	May 1959 (19)
A. Executives, Officers and Staff Assistants	1,328	679	903	979	836	803	100.0	100.0	100.0	100.0	100.0	100.0	0.8	0.7	0.6	0.8	1.0	1.0
B. Professional, Clerical and General																		
1. Total	27,036	13,487	25,346	17,348	14,887	14,699	100.0	100.0	100.0	100.0	100.0	100.0	15.7	13.5	15.4	16.3	18.4	17.5
2. Clerks (Class B. & C.)	16,416	7,860	15,794	10,104	8,559	8,386	60.7	58.3	62.3	58.2	57.5	57.1	9.6	7.9	9.6	9.5	10.6	10.0
3. Mechanical Device Operators	621	362	696	651	612	601	2.3	2.7	2.7	3.8	4.1	4.1	0.4	0.4	0.4	0.6	0.8	0.7
C. Maintenance of Way and Structures																		
1. Total	33,601	16,435	22,706	14,039	8,941	9,004	100.0	100.0	100.0	100.0	100.0	100.0	19.6	16.4	13.8	13.2	11.1	10.7
2. Section and Extra Gangmen	22,433	10,793	14,520	7,536	5,993	5,885	66.7	65.7	63.9	53.7	44.7	43.1	13.1	10.8	8.8	7.1	5.0	4.6
3. Portable Equipment Operators	207	444	787	926	816	829	0.6	2.7	3.5	6.6	9.1	10.3	0.1	0.4	0.5	0.9	1.0	1.1
D. Maintenance of Equipment and Stores																		
1. Total	49,223	31,571	53,769	32,662	26,878	24,955	100.0	100.0	100.0	100.0	100.0	100.0	28.7	31.6	32.7	30.8	25.9	29.7
2. Skilled (a)	22,009	14,791	25,100	17,002	12,423	14,679	44.7	46.8	46.7	52.1	60.0	58.8	12.8	14.8	15.3	16.0	15.5	17.5
3. Unskilled (b)	21,477	14,293	24,845	9,946	4,304	4,134	43.6	38.6	38.8	30.5	20.6	24.6	12.5	12.2	12.7	9.4	5.3	7.3
E. Transportation (other than Train and Engine)																		
1. Total	19,501	11,760	18,773	13,486	11,343	10,446	100.0	100.0	100.0	100.0	100.0	100.0	11.3	11.8	11.4	12.7	14.1	12.7
2. Skilled (c)	4,253	2,001	3,627	2,467	2,444	2,397	22.3	17.0	19.5	18.3	21.5	22.5	2.5	2.0	2.2	2.3	3.0	2.9
3. Unskilled (d)	5,280	3,498	6,958	3,644	2,143	1,924	27.1	29.7	37.1	27.4	18.9	18.0	3.1	3.5	4.2	2.8	2.7	2.3
F. Transportation (Yardmasters, Switch Tenders and Hostlers)																		
1. Total	3,193	1,472	2,582	1,774	1,594	1,553	100.0	100.0	100.0	100.0	100.0	100.0	1.9	1.5	1.6	1.7	2.0	1.9
2. Yardmasters and Assistants	1,089	505	1,071	848	627	914	34.1	34.3	41.5	48.4	58.2	58.9	0.6	0.5	0.7	0.8	1.1	1.1
3. Inside Hostlers	993	557	671	241	197	211	29.8	37.8	26.0	13.8	12.4	13.6	0.6	0.6	0.4	0.2	0.2	0.3
G. Transportation (Train and Engine Service)																		
1. Total	37,698	24,520	40,176	24,007	22,228	22,246	100.0	100.0	100.0	100.0	100.0	100.0	22.0	24.5	24.5	24.5	27.5	26.5
2. Enginemen and Conductors																		
a. Road	7,853	4,947	7,992	4,622	3,938	3,894	20.8	20.2	19.9	17.8	17.7	17.5	4.6	5.0	4.9	4.4	4.9	4.6
b. Yard	5,829	3,696	6,072	4,051	3,484	3,452	15.5	15.1	16.6	16.7	20.2	20.0	3.4	3.7	4.1	4.6	5.6	4.2
c. Total	13,682	8,643	14,064	8,673	8,436	8,342	36.3	35.2	36.5	36.4	37.9	37.5	8.0	8.6	8.9	8.9	10.4	4.2
3. Firemen, Brakemen, Flagmen and Helpers																		
a. Road	12,279	8,174	12,476	7,386	5,973	5,810	32.6	33.3	31.1	28.4	26.9	26.1	7.2	8.2	7.6	7.0	7.4	6.9
b. Yard	11,742	7,703	13,036	9,148	7,853	8,090	31.2	31.4	32.4	35.2	35.2	36.4	6.8	7.7	7.9	8.6	9.7	9.6
c. Total	24,021	15,877	25,512	16,534	13,796	13,900	63.7	64.8	63.5	63.6	62.1	62.5	14.0	15.9	15.5	15.6	17.1	16.6
H. Total Employment	171,589	99,924	164,255	106,195	80,727	83,926	-	-	-	-	-	-	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes blacksmiths, boilermakers, carmen, electrical workers, machinists, molders and sheet metal workers.
(b) Includes skilled trades helpers, classified laborers and general laborers.
(c) Includes chief train dispatchers, train dispatchers, telegraphers, telephoners and towermen.
(d) Includes callers, loaders, scalers, sealers, perishable-freight inspectors, truckers (stations, warehouses and platforms), laborers (coal and ore docks and grain elevators), waiters, camp cooks, kitchen helpers, etc.

Source: PRR Annual Reports to Interstate Commerce Commission.

Research Department - PRR
July 23, 1959

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CLASS I RAILROADS

GROSS CAPITAL EXPENDITURES FOR ROAD AND EQUIPMENT COMPARED WITH TRAFFIC

YEARS 1923-1958

CLASS I RAILROADS

GROSS CAPITAL EXPENDITURES FOR ROAD AND EQUIPMENT COMPARED WITH TRAFFIC

YEARS 1925-1958
(Index 1925-29 = 100)

Year	Gross Capital Expenditures: Current Dollars (Thousands): Equipment Amount	Equipment Index	Roadway & Structures Amount	Roadway & Structures Index	Total Amount	Total Index	Gross Capital Expenditures: Constant 1957 Dollars (Thousands): Equipment Amount	Equipment Index	Roadway & Structures Amount	Roadway & Structures Index	Total Amount	Total Index	Freight Revenue Ton-Miles (Millions) Number	Freight Revenue Ton-Miles (Millions) Index	Passenger Revenue Miles (Millions) Number	Passenger Revenue Miles (Millions) Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1925	$338,114	109.5	$410,077	85.8	$748,191	95.1	$811,474	112.6	$914,472	84.4	$1,725,946	95.7	413,814	95.5	35,950	107.1
1926	371,922	120.4	513,164	107.3	885,086	112.5	885,174	122.8	1,139,224	105.2	2,024,398	112.2	443,746	102.4	35,478	105.7
1927	288,701	93.5	482,851	101.0	771,552	98.0	652,464	90.5	1,091,243	100.8	1,743,707	96.7	428,779	98.9	33,650	100.3
1928	224,301	72.6	452,364	94.6	676,665	86.0	538,322	74.7	1,040,437	96.1	1,578,759	87.5	432,915	99.9	31,601	94.2
1929	321,306	104.0	532,415	111.3	853,721	108.5	716,512	99.4	1,229,879	113.6	1,946,391	107.9	447,322	103.2	31,074	92.6
5 Year Average	308,869	100.0	478,174	100.0	787,043	100.0	720,789	100.0	1,083,051	100.0	1,803,840	100.0	433,307	100.0	33,551	100.0
1930	328,269	106.3	544,339	113.8	872,608	110.9	741,888	102.9	1,322,744	122.1	2,064,632	114.5	383,650	88.5	26,815	79.9
1931	73,105	23.7	288,807	60.4	361,912	46.0	179,107	24.8	748,010	69.1	927,117	51.4	309,225	71.4	21,894	65.3
1932	36,371	11.8	130,823	27.4	167,194	21.2	98,565	13.7	368,921	34.1	467,486	25.9	233,977	54.0	16,971	50.6
1933	15,454	5.0	88,493	18.5	103,947	13.2	41,571	5.8	257,515	23.8	299,086	16.6	249,223	57.5	16,341	48.7
1934	92,005	29.8	120,707	25.2	212,712	27.0	227,252	31.5	340,394	31.4	567,646	31.5	268,711	62.0	18,033	53.7
1935	79,335	25.7	108,967	22.8	188,302	23.9	182,470	25.3	307,287	28.4	489,757	27.2	282,037	65.1	18,476	55.0
1936	159,104	51.5	139,887	29.3	298,991	38.0	357,984	49.7	388,886	35.9	747,870	41.5	339,246	78.3	22,421	66.8
1937	322,877	104.5	186,916	39.1	509,793	64.8	681,270	94.5	487,851	45.0	1,169,121	64.8	360,620	83.2	24,655	73.5
1938	115,408	37.4	111,529	23.3	226,937	28.8	242,357	33.6	298,898	27.6	541,255	30.0	290,084	66.9	21,629	64.5
1939	133,388	43.2	128,641	26.9	262,029	33.3	274,779	38.1	347,331	32.0	622,110	34.5	333,438	77.0	22,651	67.6
1940	271,906	88.0	157,241	32.9	429,147	54.5	530,217	73.6	415,116	32.1	945,333	52.4	373,253	86.1	23,762	70.8
1941	367,568	119.0	175,453	36.7	543,021	69.0	683,676	94.9	429,860	39.7	1,113,536	61.7	475,072	109.6	29,350	87.5
1942	349,374	113.1	185,523	38.8	534,897	68.0	586,948	81.4	391,653	36.1	978,601	54.2	637,984	147.2	53,659	159.9
1943	255,981	82.9	198,301	41.5	454,282	57.7	414,689	57.5	394,619	36.4	809,308	44.9	727,075	167.8	87,820	261.8
1944	328,231	106.3	231,881	48.5	560,112	71.2	531,734	73.8	459,124	42.4	990,858	54.9	737,266	170.1	95,549	284.7
1945	314,779	101.9	248,201	51.9	562,980	71.5	509,942	70.7	466,618	43.1	976,560	54.1	681,001	157.2	91,717	273.4
1946	319,017	103.3	242,940	50.8	561,957	71.4	446,624	62.0	415,427	38.4	862,051	47.8	591,982	136.6	64,673	192.8
1947	565,901	183.2	298,788	62.5	864,689	109.9	746,989	103.6	451,170	41.7	1,198,159	66.4	654,728	151.1	45,921	136.9
1948	917,449	297.0	356,035	74.5	1,273,484	161.8	1,146,811	159.1	487,768	45.0	1,634,579	90.6	637,917	147.2	41,179	122.7
1949	981,320	317.7	330,880	69.2	1,312,200	166.7	1,177,584	163.4	453,306	41.9	1,630,890	90.4	526,500	121.5	35,095	104.6
1950	779,399	252.3	286,443	59.9	1,065,842	135.4	989,837	137.3	383,834	35.4	1,373,671	76.2	588,578	135.8	31,760	94.7
1951	1,050,849	340.2	363,146	75.9	1,413,995	179.7	1,303,053	180.3	453,933	41.9	1,756,986	97.4	646,620	149.2	34,614	103.2
1952	935,090	302.7	405,822	84.9	1,340,912	170.4	1,150,161	159.6	486,986	45.5	1,637,147	90.8	614,754	141.9	34,010	101.4
1953	857,893	277.8	401,904	84.0	1,259,797	160.1	1,003,735	139.3	466,209	43.0	1,469,944	81.5	605,813	139.8	31,655	94.3
1954	498,726	161.5	321,520	67.2	820,246	104.2	588,497	81.6	372,963	34.4	961,460	53.3	549,259	126.8	29,286	87.3
1955	568,202	184.0	341,319	71.4	909,521	115.6	664,796	92.2	382,277	35.3	1,047,073	58.0	623,615	143.9	28,526	85.0
1956	821,357	265.9	406,500	85.0	1,227,857	156.0	870,638	120.8	426,825	39.4	1,297,463	71.9	647,077	149.3	28,185	84.0
1957	1,007,749	326.3	386,956	80.9	1,394,705	177.2	1,007,749	139.8	386,956	35.7	1,394,705	77.3	618,194	142.7	25,884	77.1
1958	479,680	155.3	258,358	54.0	738,038	93.8	E 465,290	64.6	E 255,774	23.6	E 721,064	40.0	551,668	127.3	23,271	69.4
1959 E	508,784	164.7	293,881	61.5	802,665	102.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

E - Estimated

NA - Not Available

Source: Cols. (2, 4 & 6) - Bureau of Railroad Economics, Association of American Railroads.
Cols. (8 & 10) - Based on I.C.C. "Railroad Construction Indices." Indices for United States excluding Alaska.
Cols. (14 & 16) - I.C.C. "Statistics of Railways in the United States."

Research Department - PRR
July 18, 1959

PENNSYLVANIA RAILROAD

GROSS CAPITAL EXPENDITURES FOR ROAD AND EQUIPMENT COMPARED WITH TRAFFIC

YEARS 1925-1956
(Index 1925-29 = 100)

Year	Gross Capital Expenditures — Current Dollars (Thousands) — Equipment Amount	Equipment Index	Roadway & Structures Amount	Roadway & Structures Index	Total Amount	Total Index	Gross Capital Expenditures — Constant 1957 Dollars (Thousands) — Equipment Amount	Equipment Index	Roadway & Structures Amount	Roadway & Structures Index	Total Amount	Total Index	Freight Revenue Ton-Miles (Millions) Number	Freight Index	Passenger Revenue Miles (Millions) Number	Passenger Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1925	$ 24,211	93.3	$ 31,394	64.1	$ 55,605	74.2	$ 60,770	95.4	$ 72,206	62.9	$132,976	74.5	44,843	96.3	4,518	104.7
1926	40,571	156.3	43,181	88.2	83,752	111.8	101,427	159.3	99,748	86.9	201,175	112.8	48,912	105.0	4,607	106.8
1927	18,634	71.8	47,399	96.8	66,033	88.1	44,349	69.6	109,966	95.8	154,315	86.5	45,168	97.0	4,380	101.5
1928	19,554	75.3	47,706	97.4	67,260	89.8	49,081	77.1	113,063	98.5	162,144	90.9	44,990	96.6	4,067	94.3
1929	26,821	103.3	75,095	153.4	101,916	136.0	62,761	98.6	178,726	155.8	241,487	135.3	48,991	105.2	4,002	92.7
5 - Year Average	25,958	100.0	48,955	100.0	74,913	100.0	63,678	100.0	114,742	100.0	178,420	100.0	46,581	100.0	4,315	100.0
1930	20,754	80.0	89,910	183.7	110,664	147.7	48,979	76.9	224,775	195.9	273,754	153.4	40,936	87.9	3,581	83.0
1931	7,985	30.8	43,279	88.4	51,264	68.4	20,521	32.2	117,286	102.2	137,807	77.2	33,154	71.2	2,917	67.6
1932	13,396	51.6	28,248	57.7	41,644	55.6	38,045	59.7	83,049	72.4	121,094	67.9	25,222	54.1	2,187	50.7
1933	5,151	19.8	13,204	27.0	18,355	24.5	14,577	22.9	39,744	34.6	54,321	30.4	26,818	57.6	2,017	46.7
1934	20,836	80.3	43,289	88.4	64,125	85.6	53,549	84.1	126,404	110.2	179,953	100.9	28,327	60.8	2,210	51.2
1935	22,526	86.8	19,490	39.8	42,106	56.2	54,062	84.9	56,521	49.3	110,583	62.0	29,757	63.9	2,217	51.4
1936	29,063	112.0	20,652	42.2	49,715	66.4	68,589	107.7	58,858	51.3	127,447	71.4	35,707	76.7	2,882	66.8
1937	11,776	45.4	47,479	97.0	59,255	79.1	26,025	40.9	126,294	110.2	152,319	85.4	38,050	81.7	3,295	76.4
1938	8,486	32.7	20,118	41.1	28,604	38.2	18,754	29.5	54,922	47.9	73,676	41.3	27,639	59.3	2,913	67.5
1939	12,211	47.0	17,053	24.6	24,264	32.4	26,254	41.2	32,905	28.7	59,159	33.2	34,746	74.6	3,147	72.9
1940	22,696	87.4	12,954	26.5	35,650	47.6	46,300	72.7	34,458	30.0	80,758	45.3	39,756	85.3	3,442	79.8
1941	25,307	97.5	18,787	38.4	44,094	58.9	49,096	77.1	46,404	40.4	95,500	53.5	52,096	111.8	4,330	100.3
1942	31,690	122.1	31,558	64.5	63,248	84.4	55,774	87.6	68,481	59.7	124,255	69.6	67,028	143.9	7,829	181.4
1943	32,341	124.6	36,807	75.2	69,148	92.3	54,656	85.8	73,982	64.5	128,638	72.1	71,261	153.0	12,168	282.0
1944	9,933	38.3	20,230	41.3	30,163	40.3	16,787	26.4	40,660	35.3	57,247	32.1	71,262	153.0	13,051	302.5
1945	26,782	103.2	14,219	29.0	41,001	54.7	45,262	71.1	26,874	23.4	72,136	40.4	63,689	136.7	12,802	296.7
1946	16,018	61.7	17,702	36.2	33,720	45.0	23,386	36.7	30,093	26.2	53,479	30.0	56,741	121.8	9,695	224.7
1947	33,585	129.4	19,090	39.0	52,675	70.3	46,347	72.8	28,635	25.0	74,982	42.0	61,382	131.8	6,784	157.2
1948	83,089	320.1	23,248	47.5	106,337	141.9	108,016	169.6	31,617	27.6	139,633	78.3	57,990	124.4	6,034	139.8
1949	81,896	315.5	23,874	48.8	105,770	141.2	102,370	160.8	32,469	28.3	134,839	75.6	44,867	96.3	5,049	117.0
1950	63,790	245.7	24,008	49.0	87,798	117.2	82,927	130.2	32,171	28.0	115,098	64.5	49,887	107.1	4,368	101.2
1951	133,875	515.7	27,979	57.2	161,854	216.1	168,682	264.9	34,694	30.2	203,376	114.0	54,825	117.7	4,841	112.2
1952	89,393	344.4	33,928	69.3	123,321	164.6	109,059	171.3	40,374	35.2	149,433	83.8	50,102	107.6	4,750	110.1
1953	30,691	118.2	42,106	86.0	72,797	97.2	35,602	55.9	48,843	42.6	84,445	47.3	50,241	107.9	4,323	100.2
1954	12,016	46.3	28,979	59.2	40,995	54.7	14,299	22.5	33,616	29.3	47,915	26.9	42,356	90.9	3,881	89.9
1955	34,683	133.6	31,101	63.5	65,784	87.8	40,579	63.7	34,833	30.4	75,412	42.3	50,135	107.6	3,744	86.8
1956	49,774	191.7	36,316	74.2	86,090	114.9	52,760	82.9	38,132	33.2	90,892	50.9	53,428	114.7	3,720	86.2
1957	36,680	141.3	22,578	46.1	59,258	79.1	36,680	57.6	22,578	19.7	59,258	33.2	50,651	108.7	3,430	79.5
1958	34,797	134.1	12,394	25.3	47,191	63.0	E 33,753	53.0	E 12,146	10.6	E 45,899	25.7	41,485	89.1	2,928	67.9
1959 E	22,546	86.9	22,322	45.6	44,868	59.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

E - Estimated
NA - Not Available

Source: Cols. (2,4 & 6) - Office of Comptroller, P. R. R.
Cols. (8 & 10) - Based on I.C.C. "Railroad Construction Indices." Indices for Region III were used as being typical for the Pennsylvania Railroad.
Cols. (14 & 16) - P. R. R. Annual Reports.

Research Department - PRR
July 18, 1959

PENNSYLVANIA RAILROAD

CROSS TIES, RAILS, AND COMMERCIAL BALLAST - INSTALLED IN MAINTENANCE

YEARS 1925 - 1959

(Index 5 Year Average 1950-1954 = 100)

Years	Cross Ties		New Rail		Secondhand Rail		Commercial Ballast (b)			
							Stone		Gravel and Slag	
	Number	Index	Net Tons	Index	Net Tons	Index	Net Tons	Index	Net Tons	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1925	5,162,239	302.8	205,826	395.2	135,309	181.1	741,217	162.8	N.A.	
1926	5,056,445	296.1	224,196	430.9	207,897	278.3	798,674	175.4	N.A.	
1927	4,142,988	243.0	227,683	437.2	232,895	311.7	850,998	187.0	N.A.	
1928	3,776,383	221.5	259,981	499.2	99,243	132.8	885,238	194.4	1,207,823	246.3
1929	3,587,753	210.4	224,760	431.6	281,036	378.9	932,073	204.7	1,336,671	272.6
5 Year Average	4,350,328	255.2	228,527	438.8	191,676	256.6	840,160	184.5	1,272,247(a)	259.4
1930	2,790,385	163.7	136,128	261.4	188,064	251.7	458,668	100.7	493,628	100.7
1931	1,712,853	100.5	98,484	189.0	110,520	148.0	279,659	61.4	310,586	63.3
1932	1,105,578	64.9	10,135	19.5	41,718	55.8	259,447	57.0	142,343	29.1
1933	1,272,916	74.7	25,945	49.8	48,525	65.0	332,285	73.0	472,803	96.4
1934	1,466,571	82.4	25,883	49.7	62,320	83.4	313,920	69.0	380,196	77.6
5 Year Average	1,657,261	97.2	59,306	113.9	90,233	120.8	328,792	72.2	360,071	73.4
1935	1,240,228	72.7	19,263	37.0	42,216	56.5	374,228	82.2	417,311	85.1
1936	1,720,001	100.9	64,837	124.5	88,073	117.9	544,344	119.6	641,957	130.9
1937	2,252,809	132.1	68,207	131.0	119,056	159.4	627,231	137.8	632,951	129.1
1938	1,296,338	76.0	17,320	33.3	64,958	87.0	314,414	69.1	170,578	34.8
1939	1,649,687	96.8	59,873	115.0	86,768	116.1	416,042	91.4	342,038	69.7
5 Year Average	1,631,373	95.7	45,900	88.1	80,202	107.4	455,252	99.9	440,967	90.0
1940	1,789,370	105.0	85,564	164.3	109,399	146.4	433,685	95.2	611,849	124.6
1941	2,311,747	135.6	114,275	219.4	149,324	199.9	521,745	114.6	649,037	132.3
1942	2,373,980	139.3	135,092	259.4	143,298	191.7	543,776	119.3	939,199	191.5
1943	2,068,325	121.3	116,839	224.0	135,347	181.0	548,384	120.0	547,827	111.7
1944	2,161,999	126.8	127,459	244.8	159,566	213.6	550,317	120.9	479,562	97.8
5 Year Average	2,141,084	125.6	115,806	222.4	139,355	186.5	519,043	114.0	645,394	131.6
1945	2,339,633	137.2	140,074	269.0	149,110	199.6	535,567	117.6	539,382	110.0
1946	1,949,402	114.3	101,896	195.7	128,570	172.1	390,705	85.8	462,101	94.2
1947	1,905,974	111.8	83,124	159.6	118,129	158.1	373,015	82.0	444,987	90.7
1948	2,079,980	122.0	89,447	171.8	111,206	148.9	412,858	90.7	422,022	86.1
1949	1,842,084	108.1	69,903	134.2	83,201	111.4	429,535	94.3	426,343	87.0
5 Year Average	2,027,415	119.0	98,889	186.1	118,044	158.0	428,332	94.1	458,967	93.6
1950	1,899,970	111.4	57,504	110.4	69,124	92.5	460,600	101.2	465,034	94.8
1951	1,721,498	101.0	56,312	108.1	80,168	107.3	442,813	97.3	460,040	93.8
1952	2,017,589	118.3	60,634	116.5	95,283	127.5	592,032	130.0	438,734	89.1
1953	2,001,892	117.4	73,388	141.0	88,217	118.1	566,567	124.4	857,021(b)	174.8
1954	883,136	51.8	12,518	24.0	40,739	54.5	214,392	47.1	233,260	47.6
5 Year Average	1,704,817	100.0	52,076	100.0	74,706	100.0	455,281	100.0	490,418	100.0
1955	1,143,556	67.1	9,780	18.8	55,415	74.2	343,114	75.4	187,353	38.2
1956	1,267,488	72.3	14,911	28.6	47,832	64.0	459,218	100.9	316,435	64.5
1957	1,357,334	79.6	33,845	65.0	50,777	68.0	706,944	155.1	415,763	84.8
1958	802,719	47.1	8,734	16.8	36,028	48.2	351,098	77.1	287,789	58.7
1959(Budget)	674,000	39.5	7,280	14.0	28,400	37.5	460,000	101.0	250,000	51.0
5 Year Average	1,049,015	61.5	14,909	28.6	41,611	58.4	463,854	101.9	291,468	59.4

(a) Ten Year Average.
(b) In recent years, dieselization of motive power has largely eliminated the supply of steam locomotive cinders, the former heavy use of which is not shown since data thereon is not available.

Research Department - PRR
July 13, 1959

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July 13, 1959

CLASS I RAILROADS

CROSS TIES AND RAIL LAID IN REPLACEMENT

YEARS 1929 - 1958

Year	Gross Ton Miles(a) (Millions)	Miles of Track Maintained		Cross Ties			New Rail			Secondhand Rail		
		With Cross Ties	Total	Number	Per Million G.T.M.	Per Mile of Track Maintained(b)	Net Tons	Per Million G.T.M.	Per Mile of Track Maintained(c)	Net Tons	Per Million G.T.M.	Per Mile of Track Maintained(c)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	1,661,762	356,576	381,284	74,679,375	44.95	209.49	2,193,508	1.32	5.75	1,850,202	1.11	4.85
1930	1,494,908	357,002	382,040	63,353,828	42.38	177.46	1,699,042	1.14	4.45	1,295,473	0.87	3.39
1931	1,275,644	357,312	382,307	51,501,659	40.37	144.14	1,103,088	0.86	2.89	817,606	0.64	2.14
1932	1,074,740	355,456	380,857	39,196,473	38.24	110.25	441,880	0.43	1.16	451,118	0.44	1.18
1933	1,032,987	352,854	377,899	37,495,716	36.10	105.70	451,644	0.44	1.20	514,129	0.50	1.36
1934	1,107,150	350,634	375,784	43,306,205	39.12	123.51	706,824	0.64	1.88	598,316	0.54	1.59
1935	1,141,033	348,098	373,135	44,326,151	38.85	127.34	652,729	0.57	1.75	645,394	0.57	1.73
1936	1,314,487	345,736	370,577	47,361,015	36.03	137.99	1,031,854	0.78	2.78	873,658	0.66	2.36
1937	1,379,929	343,046	367,833	47,729,538	34.59	139.13	1,153,444	0.84	3.14	1,058,104	0.77	2.88
1938	1,189,747	340,740	365,670	41,363,224	34.77	121.39	671,722	0.56	1.84	675,574	0.57	1.85
1939	1,300,886	338,877	363,760	45,088,278	34.66	133.05	984,080	0.76	2.71	941,543	0.72	2.59
1940	1,406,055	336,755	361,447	43,620,653	31.02	129.53	1,118,784	0.80	3.10	1,022,111	0.73	2.83
1941	1,607,855	335,362	359,730	47,224,593	28.26	140.08	1,341,304	0.80	3.73	1,154,976	0.69	3.21
1942	2,056,505	332,199	355,947	48,616,228	23.64	146.35	1,235,292	0.65	3.75	1,185,022	0.58	3.33
1943	2,262,514	331,219	355,068	45,439,512	20.08	137.19	1,422,534	0.63	4.01	1,276,653	0.56	3.60
1944	2,316,577	331,232	355,108	48,032,634	20.73	145.01	1,749,035	0.76	4.93	1,474,402	0.64	4.15
1945	2,189,472	330,898	354,796	43,912,213	20.06	132.71	1,807,174	0.83	5.09	1,503,251	0.69	4.24
1946	1,960,714	330,636	354,782	37,562,383	19.16	113.61	1,370,505	0.70	3.86	1,207,846	0.62	3.40
1947	2,040,861	330,333	354,614	37,289,473	18.27	112.88	1,617,140	0.79	4.56	1,218,541	0.60	3.44
1948	[illegible]	330,822	355,158	36,842,371	18.47	111.37	1,530,031	0.77	4.31	1,218,847	0.61	3.43
1949	1,750,593	330,655	354,845	30,285,046	17.30	91.59	1,433,871	0.82	4.04	1,040,245	0.59	2.93
1950	1,854,591	329,747	354,067	30,493,607	16.44	92.48	1,353,003	0.73	3.82	1,100,375	0.59	3.11
1951	1,951,742	329,583	353,901	29,061,560	14.89	88.18	1,266,288	0.65	3.58	1,039,677	0.53	2.94
1952	1,901,884	329,131	353,413	30,331,899	15.95	92.16	1,041,955	0.55	2.95	1,013,346	0.53	2.95
1953	1,872,713	328,178	352,326	29,808,949	15.92	90.83	1,268,777	0.68	3.60	1,035,614	0.55	2.94
1954	1,727,257	327,544	351,523	23,173,611	13.42	70.75	978,461	0.57	2.78	937,568	0.54	2.67
1955	1,862,155	325,426	349,410	24,149,169	13.97	74.21	942,683	0.51	2.70	947,319	0.51	2.71
1956	1,891,008	323,764	347,794	23,846,332	12.50	73.04	855,156	0.45	2.46	876,168	0.46	2.52
1957	1,814,506	323,138	346,993	22,082,225	12.17	68.34	770,972	0.42	2.22	821,152	0.45	2.37
1958	1,649,489	320,810	344,671	16,029,558	9.72	49.97	405,739	0.24	1.18	515,041	0.31	1.49

(a) Including locomotives and tenders
(b) Equated to miles of track maintained with crossties, Column 3.
(c) Equated to total miles of track maintained, Column 4.

Research Department - PRR
July 16, 1959

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PENNSYLVANIA RAILROAD

CROSS TIES AND RAIL LAID IN REPLACEMENT

YEARS 1929 - 1958

PENNSYLVANIA RAILROAD

CROSS TIES AND RAIL LAID IN REPLACEMENT

YEARS 1929 - 1958

Year	Gross Ton Miles (a) (Millions)	Miles of Track Maintained With Cross Ties	Miles of Track Maintained Total(b)	Cross Ties Number	Cross Ties Per Million Gross Ton Miles	Cross Ties Per Mile of Track Maintained(c)	New Rail Net Tons	New Rail Per Million Gross Ton Miles	New Rail Per Mile of Track Maintained(d)	Secondhand Rail Net Tons	Secondhand Rail Per Million Gross Ton Miles	Secondhand Rail Per Mile of Track Maintained(d)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1929	174,430	24,289	24,773	3,587,753	20.57	161.11	224,760	1.29	9.07	283,036	1.62	11.43
1930	155,045	24,817	25,357	2,790,385	18.00	122.29	130,128	0.84	5.37	188,064	1.21	7.42
1931	132,653	24,804	25,342	1,712,853	12.91	75.11	98,424	0.74	3.88	110,520	0.83	4.36
1932	105,608	24,785	25,320	1,105,578	10.47	48.52	10,135	0.10	0.40	41,716	0.40	1.65
1933	106,309	24,033	24,500	1,272,916	11.97	57.77	25,945	0.24	1.06	48,525	0.46	1.98
1934	110,023	21,897	24,303	1,404,571	12.77	64.14	25,883	0.24	1.07	62,320	0.57	2.56
1935	113,509	21,797	24,192	1,240,228	10.93	56.90	19,263	0.17	.80	42,216	0.37	1.75
1936	134,368	21,664	24,044	1,726,001	12.99	79.39	64,837	0.49	2.70	88,073	0.67	3.66
1937	139,708	21,541	23,886	2,252,609	16.12	104.67	68,207	0.49	2.86	119,056	0.85	4.98
1938	114,010	21,411	23,763	1,294,338	11.56	60.45	17,320	0.15	.73	64,958	0.58	2.73
1939	130,179	21,343	23,666	1,649,687	12.67	77.37	59,873	0.46	2.53	86,708	0.67	3.66
1940	143,883	21,281	23,620	1,789,370	12.44	84.08	85,564	0.59	3.62	109,399	0.76	4.63
1941	176,373	21,300	23,587	2,311,747	13.11	108.53	114,275	0.65	4.85	149,324	0.85	6.34
1942	215,394	21,393	23,534	2,373,980	11.02	110.97	135,092	0.63	5.74	143,238	0.67	6.09
1943	227,241	21,359	23,037	2,068,325	9.10	96.87	116,639	0.51	4.93	135,247	0.59	5.72
1944	231,963	21,370	23,649	2,161,999	9.32	101.17	127,459	0.55	5.39	159,566	0.69	6.75
1945	212,278	21,372	23,652	2,339,633	11.02	109.47	140,074	0.66	5.92	149,110	0.70	6.30
1946	195,560	21,385	23,665	1,969,402	10.07	92.09	101,896	0.52	4.31	128,570	0.66	5.43
1947	194,561	21,422	23,707	1,905,974	9.80	88.97	83,124	0.43	3.51	118,129	0.61	4.98
1948	186,220	21,442	23,729	2,079,980	11.17	97.00	89,447	0.48	3.77	111,206	0.60	4.69
1949	155,969	21,412	23,731	1,842,086	11.81	86.03	69,903	0.45	2.95	83,201	0.53	3.51
1950	159,749	21,422	23,741	1,899,970	11.89	88.69	57,504	0.36	2.42	69,124	0.43	2.91
1951	169,685	21,437	23,759	1,721,496	10.15	80.30	56,312	0.33	2.37	80,108	0.47	3.37
1952	160,086	21,431	23,752	2,017,589	12.60	94.14	60,654	0.38	2.55	95,283	0.60	4.01
1953	158,218	21,366	23,679	2,001,892	12.65	93.70	73,388	0.46	3.10	88,217	0.56	3.73
1954	139,220	21,270	23,573	883,136	6.34	41.52	12,518	0.09	0.53	40,739	0.29	1.73
1955	153,699	20,720	22,963	1,143,556	7.44	55.19	9,780	0.06	0.43	40,739	0.27	1.77
1956	157,589	20,334	22,535	1,267,488	8.04	62.33	14,911	0.09	0.66	47,832	0.30	2.12
1957	150,594	20,140	22,321	1,357,334	9.01	67.39	33,845	0.22	1.52	50,777	0.34	2.27
1958	128,787	20,050	22,221	802,719	6.23	40.04	8,734	0.07	0.39	36,028	0.28	1.62

(a) Including locomotives and tenders
(b) Includes track laid with switch and bridge ties
(c) Equated to miles of track maintained with cross ties, Column 3.
(d) Equated to total miles of track maintained, Column 4.

PENNSYLVANIA RAILROAD

DEFERRED EQUIPMENT MAINTENANCE AS OF JUNE 1, 1959

PASSENGER TRAIN CARS (a)					FREIGHT TRAIN CARS				LOCOMOTIVES		
		Cars Due and Overdue					Bad Order Cars in				
Kind (1)	Number (2)	Class Repairs (3)	Intermediate Repairs (4)	Money (5)	Kind (6)	Number (7)	Excess of 2 Percent (8)	Money (9)	(10)	(11)	(12)
A. Passenger Carrying											
1. Coaches	1086	822	229	$ 14,726,781	Box	66,521	12,146	$ 16,263,494	236	Road Diesel Electric Locomotive Units due or over due for Periodic Maintenance	$ 5,347,760
2. Parlor	127	67	29	4,196,296	Hopper	55,166	11,147	19,663,308			
3. Electric	463	369	88	5,981,484	Gondola	38,106	6,836	7,745,188			
4. Tubular Train	8	-	-	-	Flat	2,800	119	183,855			
5. Mail Motor	10	6	2	79,528	Stock	509	296	243,904	99	Electric Locmotives due or overdue for Class Repairs	3,466,980
6. Dining and Cafe	178	155	22	3,413,155	Caboose	2,054	245	378,525			
7. Passenger Baggage	57	47	10	874,113					—		
B. Other											
1. Mail	144	109	-	1,398,034							
2. Baggage Express	764	514	-	4,196,296							
3. Horse Express	65	41	-	334,601							
4. Refrigerator Express	204	197	-	1,378,606							
C. Total	3126	2327	380	$ 33,062,768	Total	165,156	30,789	$ 44,478,274	Total 335		$ 8,814,740

SUMMARY

	Number of Units	Money
Passenger Train Cars Number of cars due or overdue for Class or Intermediate repairs	2,707	33,062,768
Freight Train Cars Number of Class Repairs required to reduce Bade Order cars from 21.6% to 3%	30,789	44,478,274
Locomotives Number of Locomotive units due or over due for Class repairs or Periodic Maintenance	335	8,814,740
TOTAL DEFERRED MAINTENANCE		886,355,782

(a) Excludes freight-type cars and Hudson and Manhattan electric cars, sleeping cars, etc. not maintained by Pennsylvania Railroad; total 1030.

Source: Vice President, Transportation and Maintenance - PRR

Research Department - PRR
July 15, 1959

MILES OF ROAD CONSTRUCTED AND ABANDONED

ALL LINE-HAUL RAILROADS AND PENNSYLVANIA RAILROAD

MILES OF ROAD CONSTRUCTED AND ABANDONED

ALL LINE-HAUL RAILROADS AND PENNSYLVANIA RAILROAD

Year	All Line-Haul Railroads(a)			Pennsylvania Railroad(b)		
	Construction(c)	Abandoned(d)	Net Decrease	Construction(c)	Abandoned(d)	Net Decrease
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1946	20	381	361	-	3	3
1947	79	709	630	-	7	7
1948	71	529	458	-	1	1
1949	100	620	520	-	-	-
1950	33	755	722	-	6	6
1951	71	456	385	6	9	3
1952	76	965	889	-	13	13
1953	50	666	616	9	11	2
1954	49	694	645	-	15	15
1955	105	502	397	-	25	25
1956	74	613	539	-	42	42
1957	49	1194	1145	2	31	29
1958	N.A.	N.A.	N.A.	9	31	22
Total						
1946 - 1957	777	8,084	7,307			
1946 - 1958				26	194	168

N.A. Not available

(a) Includes Class II, Lessors, Proprietary, Circular and Unofficial railroads in addition to Class I Railroads.

(b) Excludes trackage rights.

(c) Miles of road constructed includes mileage of first main track laid to extend road and does not include tracks relocated and tracks laid to shorten the distance between two points, without serving any new territory.

(d) Miles of road abandoned includes only mileage of first main track, the cost of which has been written out of the investment accounts.

NOTE: Net decrease as shown above will not agree with road mileage decreases as shown on other exhibits. The difference is explained chiefly by relocation and shortening of route distances and reclassification of track.

Source: All Line-Haul Railroads - "Statistics of Railroads in the United States", Interstate Commerce Commission.
Pennsylvania Railroad - Annual Reports to the Interstate Commerce Commission.

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July 15, 1959

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PENNSYLVANIA RAILROAD

POST WORLD WAR II ABANDONMENT PROGRAM

FIXED IMPROVEMENTS REMOVED SINCE DECEMBER 31, 1945

Item (1)	To End of 1958 (2)	Additional Programmed (3)	Total (4)
A. Number			
1. Miles of Track (a)			
a. Main	885	300	1,185
b. Yards and Siding	959	325	1,284
c. Total	1,844	625	2,469
2. Passenger and freight stations, signal and communication facilities, enginehouses, turntables, coaling stations, etc. (Units)	1,235	460	1,695
B. Ledger Value			
1. Miles of Track (a)			
a. Main	$22,400,000	$ 7,600,000	$30,000,000
b. Yards and Siding	16,700,000	5,700,000	22,400,000
c. Total	$39,100,000	$13,300,000	$52,400,000
2. Passenger and freight stations, signal and communication facilities, enginehouses, turntables, coaling stations, etc.	$26,700,000	$13,000,000	$39,700,000
3. Total	$65,800,00	$26,300,000	$92,100,000

(a) Excludes trackage rights.

Source: Chief Engineer - PRR

Research Department - PRR
July 13,1959

I - INTERCITY FREIGHT TRAFFIC BY PUBLIC AND PRIVATE CARRIERS

AND UNITED STATES POPULATION

I - INTERCITY FREIGHT TRAFFIC BY PUBLIC AND PRIVATE CARRIERS

AND UNITED STATES POPULATION

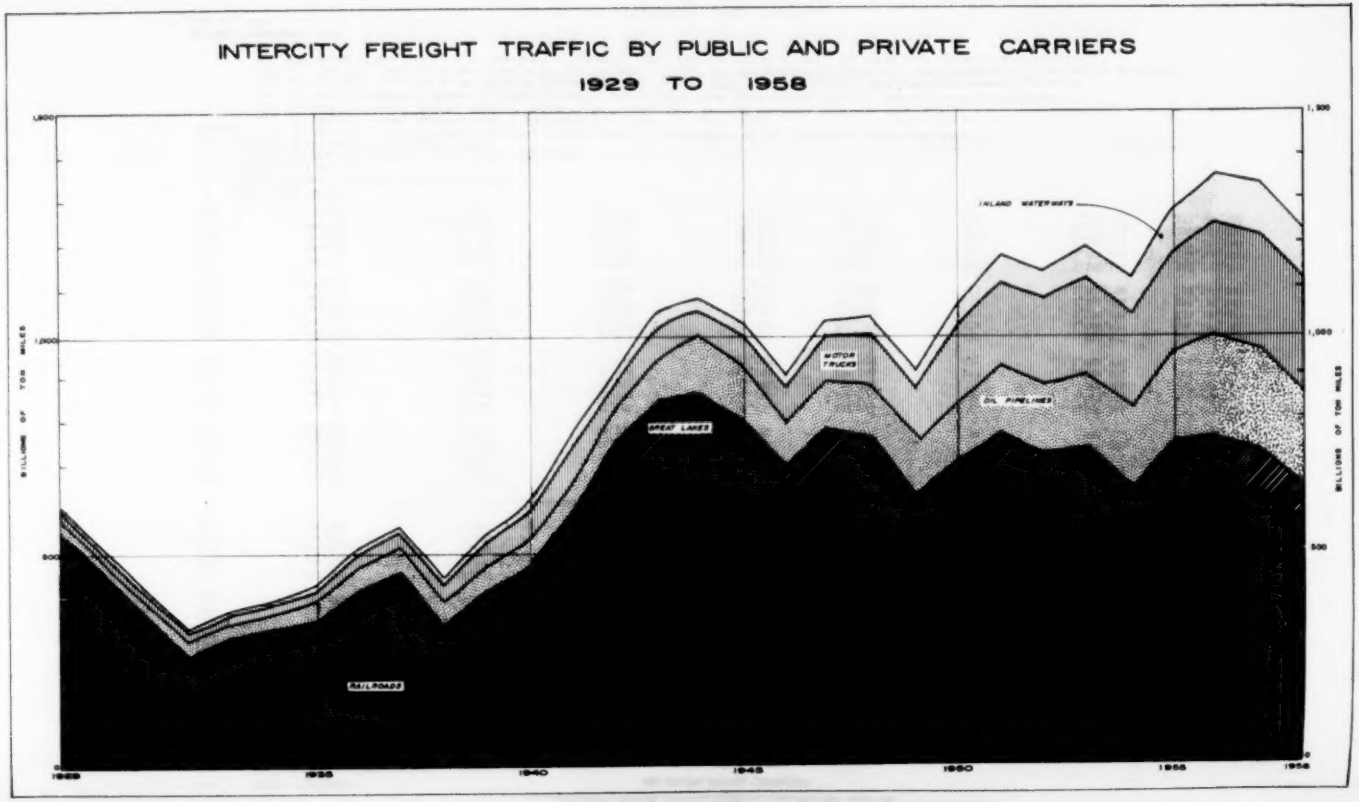
YEARS 1929 - 1958

Year (1)		MILLIONS OF TON MILES: Railroads (a) (2)	Great Lakes (b) (3)	Inland Waterways (c) (4)	Motor Trucks (5)	Oil Pipelines (6)	Airlines (7)	Total Ton Miles (8)	POPULATION Residing In The United States (9)
1929		454,800	97,322	8,661	19,689	26,900	3	607,375	121,770,000
1930		389,600	77,366	9,087	20,345	27,000	4	524,302	122,775,046
1931		314,200	49,079	9,233	20,153	29,200	4	421,869	124,040,000
1932		237,600	24,734	7,905	18,806	30,900	3	319,948	124,840,000
1933		253,000	45,069	10,232	18,691	32,800	3	359,795	125,579,000
1934		272,900	48,267	9,423	20,652	34,300	3	385,545	126,374,000
1935		286,300	54,690	13,406	24,628	44,400	5	423,429	127,250,000
1936		344,600	77,264	15,387	28,844	52,000	8	518,103	128,053,000
1937		366,500	93,244	16,883	32,306	58,200	9	567,142	128,825,000
1938		294,800	49,004	17,743	37,000	55,000	10	453,557	129,825,000
			(----------REVISED SERIES----------						
1939		338,850	76,312	19,937	52,821	55,602	12	543,534	130,880,000
1940		379,201	95,645	22,112	62,043	59,277	14	618,592	131,669,275
1941		481,756	113,639	26,815	81,363	68,428	19	772,020	133,121,000
1942		645,122	114,167	26,398	58,896	75,087	34	929,004	133,920,000
1943		734,829	115,346	26,306	56,784	97,867	53	1,031,185	134,245,000
1944		746,912	118,769	31,386	58,264	132,864	71	1,088,266	132,885,000
1945		696,809	113,028	29,709	66,948	126,530	91	1,027,115	132,481,000
1946		602,069	96,022	27,951	81,992	95,727	93	903,854	140,054,000
1947		684,523	122,165	34,549	102,095	105,161	158	1,018,651	143,446,000
1948		647,267	118,707	43,139	116,045	119,597	223	1,044,978	146,093,000
1949		534,694	97,503	41,893	126,636	114,916	235	915,877	148,665,000
1950		596,940	111,687	51,657	172,860	129,175	318	1,062,637	150,697,361
1951		655,353	119,984	62,232	188,012	152,115	379	1,178,075	153,384,000
1952		623,373	104,530	63,837	194,607	157,502	415	1,144,264	155,761,000
1953		614,199	127,383	75,056	217,163	169,884	413	1,204,098	158,313,000
1954		554,557	91,175	82,504	214,626	179,203	397	1,124,462	161,191,000
1955		631,385	118,845	97,663	226,188	203,244	481	1,277,806	164,302,000
1956		655,891	110,665	109,313	253,751	229,959	563	1,360,142	167,261,000
1957	P	626,222	117,231	114,561	266,856	232,660	601	1,352,131	170,293,000
1958	E	559,000	85,000	106,000	260,000	223,000	650	1,233,650	173,260,000

P Preliminary figures.
E Estimated figures from best available sources.
(a) Includes mail and express
(b) Includes Canadian and overseas traffic on the Great Lakes
(c) Excludes coastwise and intercoastal traffic

SOURCES: Col. (2) 1929-38: Bureau of Railway Economics, A.A.R.; 1939-57: Annual Report of the Interstate Commerce Commission
Col. (3) 1929-57: Annual Reports, Corps of Engineers, U. S. Army
Col. (4) 1929-56: Annual Reports, Corps of Engineers, U. S. Army; 1957: American Waterways Operators, Inc.
Col. (5) 1929: Estimated by Bureau of Railway Economics, base on motor truck registrations; 1930-57: American Trucking Association
Col. (6) 1929-38: Estimated by the Bureau of Railway Economics, A.A.R.; 1939-57: Annual Report of the Interstate Commerce Commission
Col. (7) 1929-33: Estimated by the Bureau of Railway Economics, A.A.R.; 1934-57: Statistical Handbook of Civil Aviation, Civil Aeronautic Administration.
Col. (9) Bureau of the Census, U. S. Department of Commerce, 1930, 1940 and 1950 as of April 1st, other years estimated as of July 1st.

Research Department - PRR
July 13, 1959



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II - DISTRIBUTION OF INTERCITY TON MILES IN THE UNITED STATES

PERCENTAGE OF TOTAL BY EACH MODE OF TRANSPORTATION *

YEARS 1929 - 1958

II - DISTRIBUTION OF INTERCITY TON MILES IN THE UNITED STATES

PERCENTAGE OF TOTAL BY EACH MODE OF TRANSPORTATION *

YEARS 1929 - 1958

Year (1)	Railroads (2)	Great Lakes (3)	Inland Waterways (4)	Motor Trucks (5)	Oil Pipelines (6)	Airlines (7)	Total (8)
1929	74.9	16.0	1.4	3.3	4.4	---	100
1930	74.3	14.8	1.7	3.9	5.3	---	100
1931	74.5	11.6	2.2	4.8	6.9	---	100
1932	74.3	7.7	2.5	5.9	9.6	---	100
1933	70.3	12.5	2.9	5.2	9.1	---	100
1934	70.8	12.5	2.4	5.4	8.9	---	100
1935	67.6	12.9	3.2	5.8	10.5	---	100
1936	66.5	14.9	3.0	5.6	10.0	---	100
1937	64.6	16.4	3.0	5.7	10.3	---	100
1938	65.0	10.8	3.9	8.2	12.1	---	100
		(----------REVISED SERIES----------)					
1939	62.4	14.0	3.7	9.7	10.2	---	100
1940	61.3	15.5	3.6	10.0	9.6	---	100
1941	62.4	14.7	3.5	10.5	8.9	---	100
1942	69.5	13.1	2.8	6.5	8.1	---	100
1943	71.3	11.2	2.5	5.5	9.5	---	100
1944	68.6	10.9	2.9	5.4	12.2	---	100
1945	67.3	11.0	2.9	6.5	12.3	---	100
1946	66.6	10.6	3.1	9.1	10.6	---	100
1947	65.3	11.0	3.4	10.0	10.3	---	100
1948	61.9	11.4	4.1	11.1	11.5	---	100
1949	58.4	10.6	4.6	13.8	12.6	---	100
1950	56.2	10.5	4.9	16.3	12.1	---	100
1951	55.6	10.2	5.3	16.0	12.9	---	100
1952	54.5	9.1	5.6	17.0	13.8	---	100
1953	51.0	10.6	6.2	18.1	14.1	---	100
1954	49.5	8.1	7.4	19.1	15.9	---	100
1955	49.4	9.3	7.7	17.7	15.9	---	100
1956	48.2	8.2	8.0	18.7	16.9	---	100
1957	46.3	8.7	8.5	19.3	17.2	---	100
1958	45.3	6.9	8.6	21.1	18.1	---	100

* Based on tabulation of comparison Chart I.

Research Department - PRR
July 14, 1959

III - INTERCITY FREIGHT TRAFFIC AND UNITED STATES POPULATION

INDICES *

YEARS 1929 - 1958
(Index 1944 = 100)

Year (1)	TON MILES: Railroads (2)	Great Lakes (3)	Inland Waterways (4)	Motor Trucks (5)	Oil Pipelines (6)	Airlines (7)	Total Ton-Miles (8)	POPULATION Residing In the United States (9)
1929	60.9	81.9	27.6	33.8	20.2	4.2	55.8	91.6
1930	52.2	64.9	29.0	34.9	20.3	5.6	48.2	92.4
1931	42.1	41.3	29.4	34.6	22.0	5.6	38.8	93.3
1932	31.8	20.8	25.2	32.3	23.3	4.2	29.4	93.9
1933	33.9	37.9	32.6	32.1	24.7	4.2	33.1	94.5
1934	36.5	40.6	30.0	35.4	25.8	4.2	35.4	95.1
1935	38.3	46.0	42.7	42.3	33.4	7.0	38.9	95.8
1936	46.1	65.0	49.0	49.5	39.1	11.3	47.6	96.4
1937	49.1	78.5	53.8	55.4	43.8	12.7	52.1	96.9
1938	39.5	41.3	56.5	63.5	41.4	14.1	41.7	97.7
		(----------REVISED SERIES----------)						
1939	45.4	64.3	63.5	90.7	41.8	16.9	49.9	98.5
1940	50.8	80.5	71.4	106.5	44.6	19.7	56.8	99.1
1941	64.5	95.7	85.4	139.6	51.5	26.8	70.9	100.2
1942	86.4	94.4	84.1	101.1	56.5	47.9	85.4	100.8
1943	98.4	97.1	83.8	97.5	73.7	74.6	94.8	101.0
1944	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1945	92.5	95.2	94.7	114.9	95.2	128.2	94.4	99.7
1946	80.6	80.8	89.1	140.7	72.0	131.0	83.1	105.4
1947	89.0	102.9	110.1	175.2	79.1	222.5	93.6	107.9
1948	86.7	99.9	137.4	199.2	90.0	314.1	96.0	109.9
1949	71.6	82.1	133.5	217.3	86.5	331.0	84.2	111.9
1950	79.9	94.0	164.6	296.7	97.2	447.9	97.6	113.4
1951	87.7	101.0	198.3	322.7	114.5	533.8	108.3	115.4
1952	83.5	88.0	203.4	334.0	118.5	584.5	105.1	117.2
1953	82.2	107.3	239.1	372.7	127.9	581.7	110.6	119.1
1954	74.5	76.8	262.9	368.4	134.9	559.2	103.3	121.3
1955	84.5	100.1	311.2	388.2	153.0	677.5	117.4	123.6
1956	87.8	93.2	348.3	435.5	173.1	793.0	125.0	125.9
1957	83.8	98.7	365.0	447.7	175.1	846.5	124.2	128.2
1958	74.8	71.6	337.7	446.2	167.8	915.5	113.4	128.2

* Based on companion tabulation I.

Research Department - PLK
July 14, 1959

CLASS I RAILROADS

CARS OF REVENUE FREIGHT LOADED

CLASS I RAILROADS

CARS OF REVENUE FREIGHT LOADED

YEARS 1929 - 1958
(Index 1944 = 100)
(Thousands)

Year	Grain and Grain Products		Livestock		Forest Products		Coal		Coke		Ore		Miscellaneous		Merchandise L.C.L.		Total	
	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1929	2,396	95.0	1,419	159.1	3,248	143.0	9,095	102.3	634	84.4	2,282	86.1	20,547	102.7	13,206	243.3	52,828	121.7
1930	2,265	89.8	1,285	144.1	2,369	104.3	7,927	89.2	488	65.0	1,662	62.7	17,681	88.4	12,201	224.8	45,878	105.7
1931	2,024	80.3	1,162	130.3	1,471	64.8	6,493	73.0	325	43.3	875	33.0	13,852	69.2	10,949	201.7	37,151	85.6
1932	1,653	65.6	949	106.4	899	39.6	5,339	60.1	224	29.8	210	7.9	9,835	49.2	9,070	167.1	28,180	65.0
1933	1,660	65.8	887	99.4	1,101	48.5	5,695	64.1	298	39.7	743	28.0	10,390	52.0	8,446	155.6	29,220	67.3
1934	1,646	65.3	1,074	120.4	1,149	50.6	6,135	69.0	333	44.3	793	30.0	11,474	57.3	8,241	151.8	30,846	71.1
1935	1,577	62.6	714	80.0	1,384	61.0	6,145	69.1	340	45.3	1,036	39.1	12,227	61.1	8,081	148.9	31,504	72.6
1936	1,805	71.6	759	85.1	1,683	74.1	6,937	78.0	480	64.0	1,623	61.3	14,546	72.7	8,276	152.5	36,109	83.2
1937	1,789	71.0	722	81.0	1,828	80.5	6,977	78.5	508	67.6	2,208	83.4	15,174	75.8	8,466	156.0	37,670	86.8
1938	1,967	78.0	703	78.8	1,418	62.4	5,541	62.3	275	36.6	846	32.0	12,026	60.1	7,682	141.5	30,457	70.2
1939	1,940	77.0	694	77.8	1,584	69.7	6,083	68.4	414	55.1	1,615	61.0	13,751	68.7	7,831	144.3	33,911	78.1
1940	1,835	72.8	685	76.8	1,800	79.3	6,820	76.7	549	73.1	2,148	81.1	14,842	74.2	7,679	141.5	36,358	83.8
1941	2,028	80.4	651	73.0	2,190	96.4	7,606	85.6	679	90.4	2,683	101.3	18,476	92.3	8,040	148.1	42,352	97.6
1942	2,185	86.7	745	83.5	2,445	107.7	8,356	94.0	732	97.5	3,016	113.9	19,755	98.7	5,537	102.0	42,771	98.5
1943	2,648	105.0	838	94.0	2,229	98.2	8,507	95.7	752	100.1	2,816	106.3	19,571	97.8	5,080	93.6	42,440	97.8
1944	2,521	100.0	892	100.0	2,271	100.0	8,890	100.0	751	100.0	2,649	100.0	20,007	100.0	5,428	100.0	43,408	100.0
1945	2,734	108.4	894	100.2	2,039	89.8	8,296	93.3	695	92.5	2,474	93.4	19,258	96.3	5,529	101.9	41,918	96.6
1946	2,497	99.0	925	103.7	2,263	99.6	8,004	90.0	587	78.2	1,996	75.3	18,744	93.7	6,325	116.5	41,341	95.2
1947	2,726	108.1	770	86.3	2,415	106.3	9,088	102.2	732	97.5	2,651	100.1	20,049	100.2	6,071	111.8	44,502	102.5
1948	2,468	97.9	630	70.6	2,348	103.4	8,690	97.7	739	98.4	2,701	102.0	19,686	98.4	5,457	100.5	42,719	98.4
1949	2,583	102.5	551	61.8	1,952	86.0	6,218	70.0	588	78.3	2,210	83.4	17,220	86.1	4,589	84.5	35,911	82.7
1950	2,466	97.8	491	55.0	2,226	97.0	7,240	81.4	727	96.8	2,529	95.5	18,955	94.7	4,269	78.6	38,903	89.6
1951	2,588	102.7	497	55.7	2,363	104.1	7,503	84.4	838	111.6	3,004	113.4	19,840	99.2	3,866	71.2	40,499	93.3
1952	2,565	101.7	492	55.2	2,270	99.9	6,717	75.6	673	89.6	2,653	100.2	18,924	94.6	3,691	68.0	37,985	87.5
1953	2,453	97.3	451	50.6	2,254	99.3	6,371	71.7	688	91.6	3,143	118.6	19,360	96.8	3,496	64.4	38,216	88.0
1954	2,555	101.3	447	50.1	2,085	91.8	5,670	63.8	422	56.2	2,115	79.8	17,436	87.1	3,186	58.7	33,916	78.1
1955	2,633	104.4	441	49.4	2,275	100.2	6,508	73.2	616	82.0	2,846	107.4	19,087	95.4	3,230	59.5	37,636	86.7
1956	2,705	107.3	442	49.6	2,316	102.0	7,007	78.8	616	82.0	2,749	103.8	18,953	94.7	3,056	56.3	37,844	87.2
1957	2,674	106.1	343	38.5	1,995	87.8	6,749	76.0	575	76.6	2,863	108.1	17,551	87.7	2,750	50.7	35,500	81.8
1958	2,873	114.0	308	34.5	1,050	46.2	5,522	62.1	342	45.5	1,745	65.9	15,235	76.1	2,331	43.0	30,206	69.6

Source: Car Service Division, Association of American Railroads

Research Department - PRR
July 14, 1959

CLASS I RAILROADS

TONS OF REVENUE FREIGHT ORIGINATED BY COMMODITY GROUPS

YEARS 1929 - 1958
(Index 1944 = 100)
(Thousands)

Year	Products of Agriculture		Animals and Products		Products of Forests		Products of Mines		Manufactures and Miscellaneous		Forwarder Traffic		L. C. L.		Total	
	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index	Number	Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1929	115,343	79.2	24,907	98.0	94,855	113.3	737,879	94.0	330,044	77.1	-	-	30,043	179.1	1,339,091	89.8
1930	110,728	76.0	23,139	91.0	69,371	82.8	642,537	81.8	279,765	65.0	-	-	24,667	147.4	1,153,197	77.3
1931	77,487	67.0	21,632	85.1	43,024	51.4	511,903	64.0	207,366	48.5	-	-	22,774	113.2	894,186	60.0
1932	84,917	58.3	18,095	71.0	26,109	31.2	362,426	46.1	142,682	33.6	-	-	15,234	75.7	646,423	43.3
1933	81,704	56.1	17,651	69.5	33,165	39.6	395,065	50.3	157,009	36.7	-	-	14,351	71.3	698,943	46.9
1934	79,305	54.4	20,363	80.1	35,650	42.6	436,380	55.6	179,253	41.9	-	-	14,345	71.3	765,296	51.3
1935	74,338	52.4	15,125	59.5	42,483	50.7	449,136	56.7	196,506	46.0	-	-	14,039	69.8	789,627	53.0
1936	86,648	59.5	16,209	63.8	53,156	63.5	541,488	69.0	245,037	57.3	-	-	16,292	81.0	958,830	64.3
1937	89,460	61.4	15,233	60.0	58,658	70.1	569,745	72.6	265,302	62.0	-	-	17,188	85.4	1,015,586	68.1
1938	95,390	65.5	14,740	58.1	43,973	52.5	418,835	52.1	194,512	45.5	-	-	14,392	71.5	771,862	51.8
1939	91,564	62.9	15,049	59.2	50,156	60.0	496,939	63.3	230,289	53.8	2,797	81.6	14,875	74.0	901,669	60.5
1940	88,821	61.0	15,458	60.8	58,221	69.5	570,218	72.6	259,261	60.6	2,749	80.2	14,693	73.0	1,009,421	67.7
1941	100,173	68.8	17,810	70.1	71,540	85.4	684,433	87.2	333,138	77.9	3,465	101.1	18,091	89.9	1,227,650	82.3
1942	117,318	80.6	20,620	81.1	84,570	101.0	804,577	102.5	373,285	87.2	3,242	94.6	17,575	87.3	1,421,187	95.3
1943	148,971	102.3	22,936	90.3	80,879	96.6	797,163	101.5	408,618	95.5	3,727	108.8	18,911	94.0	1,481,225	99.3
1944	145,685	100.0	25,413	100.0	83,731	100.0	785,265	100.0	427,845	100.0	3,427	100.0	20,125	100.0	1,491,491	100.0
1945	159,571	109.5	23,748	93.4	75,604	90.3	732,942	93.3	408,883	95.6	3,332	97.2	20,833	103.5	1,424,913	95.5
1946	149,941	103.0	21,587	85.0	84,816	101.3	717,806	91.4	364,455	85.2	3,625	105.8	24,387	121.2	1,366,617	91.6
1947	158,168	108.6	19,716	77.6	87,027	104.0	847,807	108.0	397,529	93.0	4,730	138.3	22,561	112.1	1,537,546	103.1
1948	145,176	99.7	16,865	66.4	86,104	102.8	845,640	107.7	390,519	91.3	4,308	125.7	18,266	90.8	1,506,878	101.0
1949	140,383	96.4	15,284	60.1	69,257	82.7	653,759	83.3	331,563	77.5	3,665	107.0	12,592	62.6	1,226,502	82.2
1950	129,175	88.7	14,321	56.4	78,860	94.2	744,808	95.1	369,678	86.4	4,467	130.3	10,887	54.1	1,354,196	90.8
1951	140,811	96.7	14,362	56.5	86,522	103.3	819,373	104.3	400,857	93.7	5,098	148.8	10,379	51.6	1,477,402	99.1
1952	138,416	95.0	14,602	57.5	83,480	99.7	752,699	95.9	378,927	88.6	5,170	150.9	9,310	46.3	1,382,604	92.7
1953	131,137	90.0	13,768	54.2	82,107	98.1	754,293	96.1	389,632	91.1	5,109	149.1	8,255	41.0	1,384,301	92.8
1954	131,736	90.4	13,127	51.7	75,650	90.3	656,072	83.8	341,716	79.9	4,704	137.3	6,964	34.6	1,229,969	82.1
1955	133,789	91.8	13,161	51.8	82,584	98.6	761,993	97.0	392,892	91.8	5,227	152.5	6,993	34.7	1,396,339	93.6
1956	138,493	94.8	13,198	52.0	87,799	104.9	796,480	101.4	416,197	93.5	5,170	150.9	6,485	32.2	1,447,422	97.0
1957	137,618	94.5	11,074	43.6	77,497	92.6	769,675	98.0	374,332	87.5	4,488	130.8	5,443	27.0	1,380,327	92.5
1958 P	146,746	100.7	9,895	39.0	73,289	87.5	628,911	80.1	329,817	75.4	4,493	131.1	4,402	21.9	1,190,353	79.8

P Preliminary

Source: "Statistics of Railways in the United States", Interstate Commerce Commission

Research Department - PRR
July 14, 1959

CLASS I RAILROADS

CARS OF REVENUE FREIGHT LOADED BY WEEKS

SELECTED YEARS

Week	World War II Increase 1939	1944	Post War Peak 1947	Korean Increase 1950	1951	Post-Korean Peak 1956	1959
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1st	529,371	769,629	687,428	505,753	662,427	611,299	467,697
2nd	582,244	779,531	830,953	629,543	783,015	710,338	550,090
3rd	586,656	796,650	828,060	619,183	779,750	699,286	586,254
4th	590,459	810,890	821,928	635,934	784,166	691,850	553,845
5th	573,127	805,714	835,051	612,464	651,165	680,389	582,636
6th	576,352	793,161	767,301	568,816	573,209	684,328	565,397
7th	576,645	774,237	799,977	560,068	760,557	696,319	567,134
8th	556,742	786,984	776,689	546,707	734,845	687,018	583,183
9th	596,424	786,895	809,991	574,449	785,861	710,976	575,583
10th	588,426	780,265	805,775	707,911	749,522	697,601	595,930
11th	591,166	785,195	841,147	725,534	745,128	685,983	595,302
12th	601,948	777,578	844,041	717,259	748,878	697,248	603,178
13th	600,691	786,106	829,342	720,404	755,435	724,968	609,755
Total 1st 13 Weeks	7,548,251	10,228,853	10,517,733	8,128,005	9,493,958	8,980,303	7,429,984
14th	534,952	787,985	715,159	700,049	739,523	685,378	590,133
15th	547,179	798,683	757,839	707,385	777,989	742,053	616,359
16th	557,867	838,737	865,844	727,688	810,022	763,437	633,548
17th	585,190	850,441	893,712	745,295	824,662	779,977	647,282
18th	572,025	835,538	862,574	743,996	803,337	770,558	647,123
19th	556,644	807,182	884,242	711,789	808,127	777,606	677,398
20th	612,868	871,075	888,208	743,313	809,475	778,997	684,380
21st	623,542	868,821	890,605	780,926	811,799	788,754	685,765
22nd	583,309	810,698	830,205	709,896	744,655	719,209	687,726
23rd	630,060	873,174	900,747	796,041	813,326	787,975	682,624
24th	633,955	877,493	895,292	815,876	826,883	801,128	709,139
25th	638,534	880,331	901,496	809,971	830,847	799,992	723,798
26th	641,404	897,210	846,141	783,520	821,615	755,279	697,633
Total 2nd 13 Weeks	7,719,549	11,056,368	11,151,864	9,766,745	10,624,355	9,948,843	8,694,826
Total 1st 26 Weeks	15,263,800	21,285,201	21,669,597	17,894,750	19,918,313	18,929,046	16,124,810
27th	555,152	764,347	629,204	553,910	588,159	478,297	573,385
28th	569,888	903,901	807,117	789,606	779,308	619,988	554,436
29th	651,665	902,092	719,725	830,076	805,378	648,492	
30th	655,531	909,490	919,928	845,011	820,476	649,806	
31st	656,553	889,594	921,591	837,630	813,388	660,287	
32nd	681,043	895,181	905,244	847,708	809,365	715,207	
33rd	669,793	886,623	906,305	851,240	829,198	749,644	
34th	683,906	904,871	900,895	838,665	838,587	770,413	
35th	716,297	897,803	925,712	851,841	829,681	784,366	
36th	662,357	825,186	868,939	751,449	732,769	679,651	
37th	800,431	891,686	922,379	860,658	850,812	830,849	
38th	809,752	897,883	931,072	870,529	863,690	822,436	
39th	829,698	912,627	937,954	885,186	864,375	831,648	
Total 3rd 13 Weeks	9,022,144	11,460,864	11,436,075	10,614,109	10,425,386	9,251,084	
40th	836,102	877,035	942,455	863,903	858,757	815,193	
41st	839,952	898,720	956,862	868,889	868,683	823,207	
42nd	856,289	906,005	954,149	891,230	886,648	828,741	
43rd	829,358	916,665	954,627	887,935	884,800	816,803	
44th	801,108	893,069	940,746	863,149	837,617	800,367	
45th	781,508	839,504	910,170	839,880	793,403	772,850	
46th	766,987	863,992	878,283	837,458	814,298	763,898	
47th	673,113	768,338	902,662	701,551	711,447	650,620	
48th	685,496	807,836	782,331	746,165	821,776	752,146	
49th	683,973	793,156	878,588	766,895	773,130	738,253	
50th	678,134	790,242	854,159	773,131	753,194	716,852	
51st	651,394	762,972	832,130	747,189	671,362	698,424	
52nd	568,064	584,876	599,354	642,407	502,008	487,546	
Total 4th 13 Weeks	9,625,554	10,662,230	11,396,516	10,463,782	10,155,683	9,644,698	
Total 2nd 26 Weeks	18,647,698	22,123,094	22,832,591	21,017,891	20,580,869	18,915,782	
Grand Total 52 Weeks	33,911,498	43,408,295	44,502,188	38,909,641	40,499,182	37,844,828	
Percent Increase	100.0%	128%		100.0%	104.1%		

Source: Association of American Railroads, Car Service Division

Research Department - PRR
July 17, 1959

CLASS I RAILROADS

INDICES OF CARS OF REVENUE FREIGHT LOADED BY WEEKS

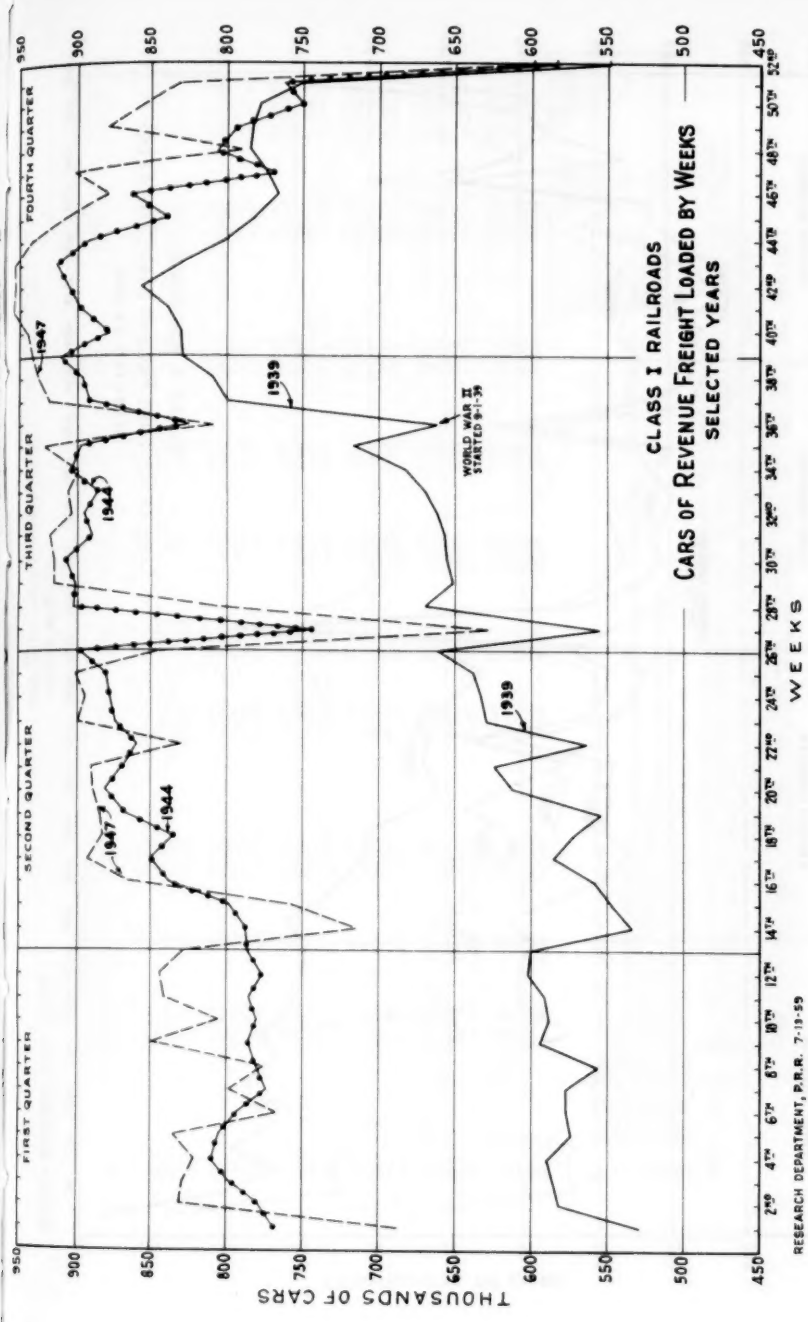
SELECTED YEARS

(Index - Average Week of 3rd Quarter 1941 = 100)

Week (1)	World War II Increase 1939 (2)	1944 (3)	Post War Peak 1947 (4)	Korean Increase 1950 (5)	1951 (6)	Post-Korean Peak 1956 (7)	1959 (8)
1st	60.0	87.3	78.0	57.4	75.1	69.3	53.1
2nd	66.0	88.4	94.3	71.4	88.2	80.6	62.4
3rd	66.5	90.6	94.0	70.2	88.4	79.3	64.5
4th	67.0	92.0	93.2	72.1	88.9	78.5	65.8
5th	65.0	91.4	94.7	69.5	73.9	77.2	66.1
6th	65.4	90.0	87.0	64.5	65.0	77.6	64.1
7th	65.4	87.8	90.7	63.5	84.0	79.2	64.3
8th	63.2	88.6	88.1	62.0	83.4	78.0	66.1
9th	67.4	89.3	96.4	66.2	89.1	80.6	65.3
10th	66.7	88.5	91.4	80.3	85.0	79.1	67.1
11th	67.1	89.1	95.4	82.3	84.5	79.1	68.1
12th	68.3	88.2	95.7	81.4	85.0	79.1	68.4
13th	68.1	89.2	94.1	81.7	85.7	82.2	68.5
Average 1st 13 Weeks	65.9	89.3	91.8	70.9	82.8	78.4	64.8
14th	60.7	89.4	81.1	79.4	83.9	77.7	67.0
15th	62.1	90.6	86.0	80.2	88.2	84.2	70.1
16th	63.3	95.1	98.2	82.0	91.9	86.6	71.9
17th	66.4	98.5	101.4	84.5	93.5	88.5	73.4
18th	64.9	94.8	100.1	84.4	91.1	87.4	73.4
19th	63.0	98.4	100.3	80.7	91.7	88.2	74.8
20th	69.5	98.7	100.7	84.3	91.8	88.4	78.8
21st	70.7	98.5	101.0	88.6	92.1	89.4	77.4
22nd	63.9	92.0	94.2	80.5	84.5	81.6	78.0
23rd	71.5	99.0	102.2	90.3	92.3	89.3	77.4
24th	72.0	99.5	101.6	91.4	93.2	91.0	80.4
25th	72.4	97.9	102.2	91.9	94.5	90.7	82.1
26th	75.0	101.6	96.0	88.9	93.2	85.7	79.1
Average 2nd 13 Weeks	67.3	96.5	97.3	85.2	91.0	86.8	75.9
Average 1st 26 Weeks	66.6	92.9	94.5	78.0	86.9	82.6	70.3
27th	63.0	84.4	71.4	62.8	66.7	54.3	65.0
28th	76.0	102.5	91.6	89.5	88.4	70.3	62.9
29th	74.0	102.2	104.3	94.2	91.4	73.6	
30th	74.4	103.2	104.3	95.8	93.1	73.7	
31st	74.5	101.0	104.5	95.0	92.2	74.9	
32nd	75.0	101.5	102.7	96.2	91.8	81.1	
33rd	76.0	100.6	102.8	96.6	94.1	87.3	
34th	77.6	102.6	102.2	95.1	95.1	87.4	
35th	81.3	101.8	105.0	96.6	94.1	89.0	
36th	75.1	93.6	91.8	85.2	83.1	77.1	
37th	90.8	101.1	104.6	98.3	96.5	93.1	
38th	91.8	101.8	105.6	98.7	98.0	93.3	
39th	94.1	103.5	106.4	99.8	98.1	94.3	
Average 3rd 13 Weeks	78.7	100.0	99.8	92.6	91.0	80.7	
40th	94.2	99.5	107.0	98.0	97.4	92.5	
41st	95.3	102.0	108.5	101.8	98.5	93.4	
42nd	97.1	102.8	108.2	101.1	100.6	94.0	
43rd	94.1	104.0	108.3	100.7	98.1	92.6	
44th	90.9	101.3	106.7	98.0	95.0	90.8	
45th	88.7	95.2	103.2	95.3	89.8	87.7	
46th	87.0	94.0	99.6	95.0	92.4	86.6	
47th	76.4	87.2	102.4	79.6	80.7	73.8	
48th	77.8	91.6	89.9	84.0	93.2	85.3	
49th	77.6	90.0	99.7	87.0	87.7	83.7	
50th	77.0	85.1	96.9	87.7	85.4	81.3	
51st	73.9	86.5	94.4	84.8	76.2	79.2	
52nd	62.2	66.3	68.0	68.3	57.0	55.3	
Average 4th 13 Weeks	84.0	93.0	99.4	90.8	88.6	84.3	
Average 2nd 26 Weeks	81.4	96.5	99.6	91.7	89.8	82.5	
Grand Total 52 Weeks	74.0	94.7	97.1	84.9	88.3	82.6	

Research Department - FRR
July 17, 1959

FIRST QUARTER SECOND QUARTER THIRD QUARTER FOURTH QUARTER 1947 950 950


CLASS I RAILROADS
CARS OF REVENUE FREIGHT LOADED BY WEEKS
SELECTED YEARS
THOUSANDS OF CARS
WEEKS
FIRST QUARTER
SECOND QUARTER
THIRD QUARTER
FOURTH QUARTER
1947
1944
1939
WORLD WAR II STARTED 9-1-39
RESEARCH DEPARTMENT, P.R.R. 7-19-59
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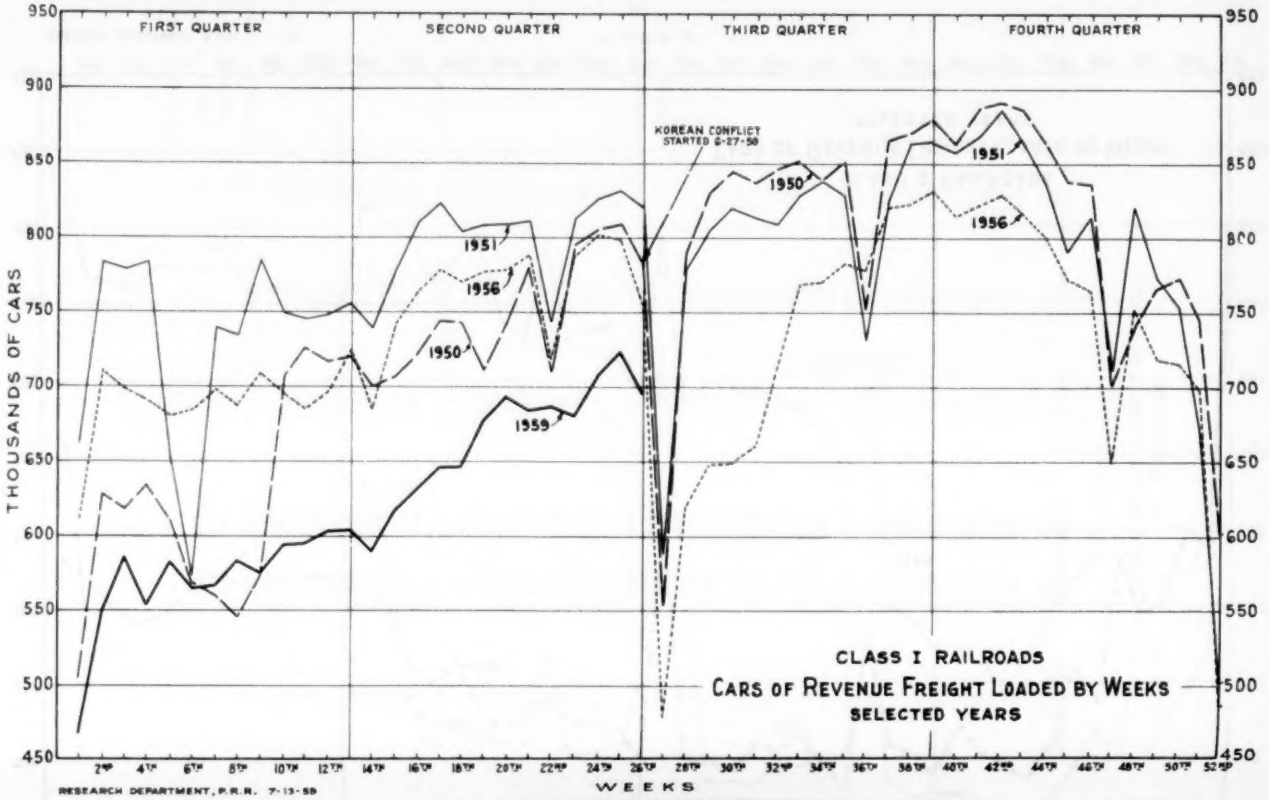

1 - INTERCITY PASSENGER TRAFFIC AND UNITED STATES POPULATION

TRANS 1929 - 1958

MILLIONS OF PASSENGER MILES

I - INTERCITY PASSENGER TRAFFIC AND UNITED STATES POPULATION

YEARS 1929 - 1958

Year (1)	Private Transportation: Private Automobiles (2)	Private Transportation: Private Airplanes(a) (3)	Private Transportation: Total Private (4)	MILLIONS OF PASSENGER MILES: For-Hire Transportation: Railroads(b) (5)	Buses (6)	Airlines(c) (7)	Inland Waterways(d) (8)	Total For-Hire (9)	Total Passenger Transportation (10)	POPULATION Residing in the United States (11)
1929	154,300	100	154,400	33,965	6,797	30	3,300	44,092	198,492	121,770,000
1930	160,900	98	160,998	29,276	7,080	73	2,800	39,229	200,227	122,775,046
1931	168,600	84	168,684	23,833	6,725	93	2,000	32,851	201,535	124,040,000
1932	156,400	76	156,476	13,311	6,540	111	1,400	21,362	177,838	124,840,000
1933	156,500	70	156,570	12,960	7,115	151	1,400	21,626	178,196	125,579,000
1934	168,100	76	168,176	14,806	8,200	163	1,500	24,669	192,845	126,374,000
1935	178,300	78	178,378	19,509	9,420	279	1,500	30,708	209,086	127,250,000
1936	197,400	78	197,478	25,560	10,500	388	1,700	36,148	233,626	128,053,000
1937	228,344	96	228,460	25,795	11,410	412	1,600	39,217	267,677	128,825,000
1938	226,300	108	226,408	22,656	10,850	480	1,487	35,473	261,881	129,825,000
1939	234,693	156	234,849	23,669	9,100	683	1,486	34,938	269,787	130,880,000
1940	245,751	212	245,963	24,766	9,800	1,052	1,317	36,935	282,698	131,669,275
1941	264,316	196	264,512	30,583	13,100	1,385	1,821	46,889	311,401	133,121,000
1942	199,635	118	199,753	55,073	20,700	3,418	1,860	79,251	279,004	133,920,000
1943	147,131	NA	147,131e	89,865	Incr. 25,500	1,634	1,927	118,926	Incr. 266,057e	134,245,000
1944	151,251	NA	151,251e	97,705	26,920	2,178	2,187	128,990	280,241e	132,885,000
1945	179,837	NA	179,837e	93,535	27,027	3,362	2,056	125,980	305,717e	132,481,000
1946	253,570	588	254,158	66,238	26,293	5,848	2,327	100,806	354,964	140,054,000
1947	272,958	980	273,938	46,752	23,948	6,110	1,845	78,655	352,593	143,446,000
1948	287,423	1,108	288,531	41,894	23,529	5,981	1,670	73,704	361,605	146,093,000
1949	376,313	1,328	377,641	35,975	27,933	7,288	1,402	72,598	450,239	148,665,000
1950	402,843	1,340	404,183	32,481	26,436	8,732	1,190	68,839	473,022	150,697,361
1951	457,797	1,355	459,152	35,306	27,428	11,583	1,333	75,640	534,782	153,384,000
1952	495,547	1,371	496,918	34,710	28,704	13,617	1,396	78,427	575,345	155,761,000
1953	529,194	1,625	530,819	32,261	28,397	15,805	1,487	77,950	608,769	158,313,000
1954	548,763	1,906	550,669	29,467	25,414	17,662	1,701	74,444	624,113	161,191,000
1955	585,817	2,065	587,882	28,695	25,519	20,676	1,738	76,628	664,510	164,302,000
1956	617,713	2,204	619,917	28,610	25,189	23,319	1,860	78,978	698,895	167,261,000
1957 P	637,755	2,400	640,155	26,251	24,998	25,902	1,930	79,081	719,236	170,293,000
1958 E	650,000	2,500	652,500	23,600	23,900	25,800	1,800	75,100	727,600	173,260,000

	Millions of Passenger Miles: For Hire	Railroads
1944	128,990	97,705
1939	34,938	23,669
Increase	94,052	74,036
Percent Increase	269	313
Percent total Increase	100	79

NA Not Available
* Does not include negligible amount of private air travel in war years.
P Preliminary figures
E Estimated figures from best available sources.
(a) Includes private and business-owned planes used for transportation of persons and excludes use for instructional or commercial purposes.
(b) All railroads including electric railways and commutation.
(c) Prior to 1949 - scheduled carriers only; since 1949 also includes non-scheduled air carriers.
(d) Includes Great Lakes, excludes intra-coastal and coastwise.
(e) Ten year census as of April 1st, intervening years estimated as of July 1st.

SOURCES: Col. (2) 1941 and prior - Federal Coordinator's Reports; 1941-57, the Annual Reports of the Interstate Commerce Commission.
(3) Statistical Handbooks of Civil Aviation, Civil Aeronautics Administration. Estimated on basis of assumed occupancy of 2 or more persons per miles flown.
(5) 1936 and prior - Annual Reports on Transport Statistics in the United States, I.C.C.; 1936-1957, The Annual Reports of the Interstate Commerce Commission.
(6) 1936 and prior - Bus Facts, National Association of Motor Bus Operators; 1936-1957, The annual Reports of the Interstate Commerce Commission.
(7) Scheduled commercial carriers, Statistical Handbook of Civil Aviation, Civil Aeronautics Administration; non-schedules commercial carriers, 1949-53, Statement No. 5517; 1954-55, Transport Economics, Interstate Commerce Commission; 1956,1958 estimated.
(8) 1936 and prior - Corps of Engineers, U.S. Army; 1936-57 the Annual Reports of the Interstate Commerce Commission.
(11) U. S. Department of Commerce, Bureau of the Census "P"-31 (1929-39); Current Population Reports No. 71 (1940-1949); No. 164 (1950-1957).

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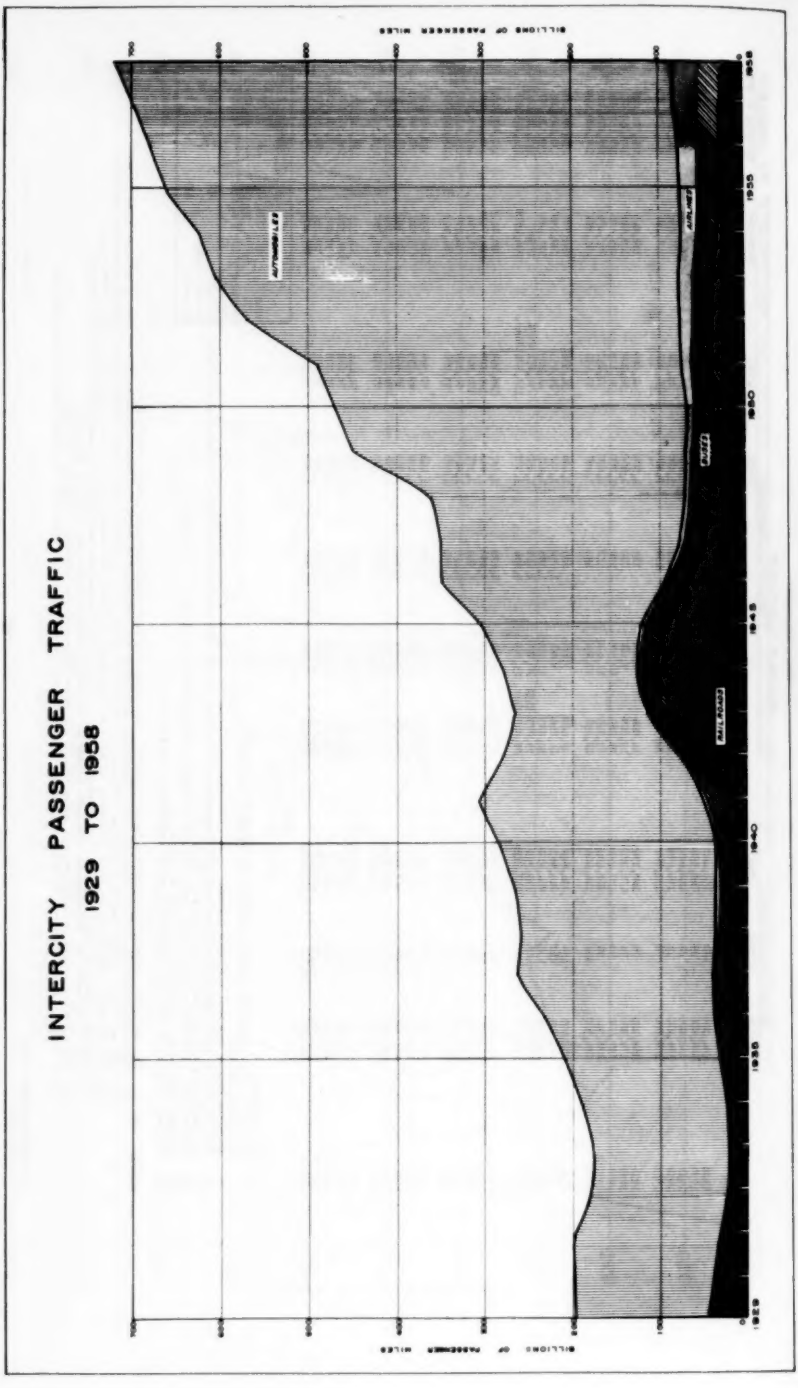
July 17, 1959



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II — DISTRIBUTION OF INTERCITY PASSENGER MILES IN THE UNITED STATES
PERCENTAGE OF TOTAL BY EACH MODE OF TRANSPORTATION *

II - DISTRIBUTION OF INTERCITY PASSENGER MILES IN THE UNITED STATES

PERCENTAGE OF TOTAL BY EACH MODE OF TRANSPORTATION *

YEARS 1929 - 1958

Year (1)	Private Transportation: Private Automobiles (2)	Private Transportation: Private Airplanes (3)	Private Transportation: Total Private (4)	For-Hire Transportation: Railroads (5)	For-Hire Transportation: Buses (6)	For-Hire Transportation: Airlines (7)	For-Hire Transportation: Inland Waterways (8)	For-Hire Transportation: Total For-Hire (9)	Total Passenger Transportation (10)
1929	77.7	0.1	77.8	17.1	3.4	0.0	1.7	22.2	100
1930	80.4	0.0	80.4	14.6	3.5	0.0	1.5	19.6	100
1931	83.7	0.0	83.7	11.8	3.4	0.0	1.1	16.3	100
1932	87.9	0.1	88.0	7.5	3.7	0.0	0.8	12.0	100
1933	87.8	0.1	87.9	7.3	4.0	0.0	0.8	12.1	100
1934	87.2	0.0	87.2	7.8	4.3	0.0	0.8	12.8	100
1935	85.3	0.0	85.3	9.3	4.5	0.1	0.7	14.7	100
1936	84.5	0.0	84.5	10.1	4.5	0.2	0.7	15.5	100
1937	85.3	0.1	85.4	9.6	4.2	0.2	0.6	14.6	100
1938	86.4	0.1	86.5	8.6	4.1	0.2	0.6	13.5	100
1939	87.0	0.1	87.1	8.8	3.3	0.2	0.6	12.9	100
1940	86.8	0.1	86.9	8.8	3.5	0.3	0.5	13.1	100
1941	84.8	0.1	84.9	9.9	4.2	0.4	0.6	15.1	100
1942	71.6	0.0	71.6	19.7	7.5	0.5	0.7	28.8	100
1943	55.3	-	55.3	33.8	9.6	0.6	0.7	44.7	100
1944	54.0	-	54.0	34.8	9.6	0.8	0.8	46.0	100
1945	58.8	-	58.8	30.6	8.8	1.1	0.7	41.2	100
1946	71.4	0.2	71.6	18.7	7.4	1.7	0.6	28.4	100
1947	77.4	0.3	77.7	13.3	6.8	1.7	0.5	22.3	100
1948	79.5	0.3	79.8	11.6	6.6	1.7	0.5	20.2	100
1949	83.6	0.3	83.9	8.0	6.2	1.6	0.3	16.1	100
1950	85.2	0.3	85.5	6.9	5.6	1.7	0.3	14.5	100
1951	85.6	0.3	85.9	6.6	5.1	2.2	0.2	14.1	100
1952	86.1	0.3	86.4	6.0	5.0	2.4	0.2	13.6	100
1953	86.9	0.3	87.2	5.3	4.7	2.6	0.2	12.8	100
1954	87.9	0.3	88.2	4.7	4.1	2.8	0.3	11.9	100
1955	88.2	0.3	88.5	4.3	3.8	3.1	0.3	11.5	100
1956	88.4	0.3	88.7	4.1	3.6	3.3	0.3	11.3	100
1957	88.7	0.3	89.0	3.6	3.5	3.6	0.3	11.0	100
1958	89.4	0.3	89.7	3.2	3.3	3.5	0.3	10.3	100

* Based on tabulation of companion Chart I.

Research Department - PMR
July 14, 1959

III - INTERCITY PASSENGER TRAFFIC AND UNITED STATES POPULATION

INDICES *

YEARS 1929 - 1958
(Index 1944 = 100)

Year	Private Transportation: Private Automobiles	Private Transportation: Private Airplanes (a)	Private Transportation: Total Private	For-Hire Transportation: Railroads	For-Hire Transportation: Buses	For-Hire Transportation: Airlines	For-Hire Transportation: Inland Waterways	For-Hire Transportation: Total For-Hire	Total Passenger Transportation	Population Residing In The United States
	PASSENGER MILES									
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1929	102.0	84.7	102.1	34.8	25.2	1.0	150.9	34.2	70.8	91.6
1930	106.4	83.1	106.4	30.0	26.3	3.4	128.0	30.4	71.4	92.4
1931	111.5	71.2	111.5	24.4	25.0	4.3	100.6	25.5	72.0	93.3
1932	103.4	64.4	103.5	13.6	24.3	5.1	64.0	16.6	63.5	93.9
1933	103.5	59.3	103.5	13.3	20.4	6.9	64.0	15.8	63.6	94.5
1934	111.1	64.4	111.2	15.2	20.5	7.5	68.6	19.1	68.8	95.1
1935	117.9	66.1	117.9	20.0	35.0	12.8	68.6	23.8	74.6	95.8
1936	130.5	66.1	130.6	24.1	39.0	17.8	77.7	28.0	83.4	96.4
1937	151.0	81.4	151.0	26.4	42.4	18.9	73.2	30.4	95.5	96.9
1938	149.6	91.5	149.7	23.2	40.3	22.0	68.0	27.5	93.4	97.7
1939	155.2	132.2	155.3	24.2	33.8	41.8	67.9	27.1	96.3	98.5
1940	162.5	179.7	162.6	25.3	36.4	45.0	60.2	28.6	101.0	99.1
1941	174.8	166.1	174.9	31.3	48.7	63.6	83.3	36.4	111.1	100.2
1942	132.0	100.0	132.1	56.4	77.6	65.1	85.0	61.4	99.6	100.8
1943	97.3	-	97.3	92.0	94.7	75.0	88.1	92.2	95.0	101.0
1944	100.0	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1945	119.0	-	119.0	95.7	100.4	154.4	93.0	97.7	109.1	99.7
1946	167.6	498.3	168.0	67.8	97.7	273.1	106.4	78.2	126.7	105.4
1947	180.5	830.5	181.1	47.8	89.0	280.5	84.4	61.0	125.8	107.9
1948	190.0	939.0	190.8	42.9	87.4	274.6	76.4	57.1	129.0	109.9
1949	248.8	1125.4	249.7	36.8	103.8	334.6	64.1	56.3	160.7	111.9
1950	266.3	1135.6	267.2	33.2	98.2	400.0	54.4	53.4	168.8	113.4
1951	302.7	1148.3	303.6	36.1	101.8	531.8	60.9	58.6	190.8	113.4
1952	327.6	1161.9	328.5	35.5	106.6	625.2	63.8	60.8	205.3	117.2
1953	350.0	1377.1	351.0	33.0	105.5	725.7	68.0	60.4	217.2	119.1
1954	362.8	1615.3	364.1	30.2	95.1	810.9	77.8	57.7	222.7	121.3
1955	387.3	1740.0	388.7	29.4	94.8	949.3	79.5	59.4	237.1	123.6
1956	408.4	1867.8	409.9	29.3	93.6	1070.7	85.0	61.2	249.4	125.9
1957	421.7	2033.9	423.2	26.9	92.9	1189.3	88.2	61.3	256.6	128.2
1958	429.7	2118.6	431.4	24.2	88.8	1184.6	82.3	58.2	259.6	130.4

* Based on tabulation of companion Chart I.
(a) 1942 used as base year due to unavailability of data for 1944.

Research Department - FRB
July 14, 1959

IV - DISTRIBUTION OF INTERCITY PASSENGER MILES IN THE UNITED STATES

PERCENTAGE OF PRIVATE AND OF FOR-HIRE BY EACH MODE OF TRANSPORTATION *

YEARS 1929 - 1958

IV - DISTRIBUTION OF INTERCITY PASSENGER MILES IN THE UNITED STATES

PERCENTAGE OF PRIVATE AND OF FOR-HIRE BY EACH MODE OF TRANSPORTATION *

YEARS 1929 - 1958

Year	Private Transportation			For-Hire Transportation				
	Private Automobiles	Private Airplanes	Total Private	Railroads	Buses	Airlines	Inland Waterways	Total For-Hire
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1929	99.9	0.1	100	77.0	15.4	0.1	7.5	100
1930	99.9	0.1	100	74.6	18.2	0.1	7.1	100
1931	99.9	0.1	100	72.5	20.5	0.3	6.7	100
1932	99.9	0.1	100	62.3	30.6	0.5	6.6	100
1933	99.9	0.1	100	59.9	32.9	0.7	6.5	100
1934	99.9	0.1	100	60.0	33.2	0.7	6.1	100
1935	99.9	0.1	100	63.5	30.7	0.9	4.9	100
1936	99.9	0.1	100	65.2	29.0	1.1	4.7	100
1937	99.9	0.1	100	65.8	29.1	1.1	4.0	100
1938	99.9	0.1	100	63.9	30.6	1.3	4.2	100
1939	99.9	0.1	100	67.8	26.0	2.0	4.2	100
1940	99.9	0.1	100	67.0	26.5	2.9	3.6	100
1941	99.9	0.1	100	65.2	27.9	3.0	3.9	100
1942	99.9	0.1	100	69.5	26.4	1.8	2.3	100
1943	100.0	-	100	75.6	21.4	1.4	1.6	100
1944	100.0	-	100	75.7	20.9	1.7	1.7	100
1945	100.0	-	100	74.2	21.5	2.7	1.6	100
1946	99.8	0.2	100	65.7	26.1	5.9	2.3	100
1947	99.6	0.4	100	59.4	30.4	7.8	2.4	100
1948	99.6	0.4	100	57.3	32.2	8.2	2.3	100
1949	99.6	0.4	100	49.5	38.5	10.1	1.9	100
1950	99.7	0.3	100	47.2	38.4	12.7	1.7	100
1951	99.7	0.3	100	46.7	36.2	15.3	1.8	100
1952	99.7	0.3	100	44.3	36.6	17.3	1.8	100
1953	99.7	0.3	100	41.4	36.4	20.2	1.9	100
1954	99.7	0.3	100	39.6	34.4	23.7	2.3	100
1955	99.7	0.3	100	37.4	33.3	27.0	2.3	100
1956	99.7	0.3	100	36.2	31.9	29.5	2.4	100
1957	99.6	0.4	100	33.2	31.6	32.8	2.4	100
1958	99.6	0.4	100	31.4	31.8	34.4	2.4	100

* Based on Companion Tabulation I.

43755 O—59——33

HIGHWAYS, AIRWAYS AND AIRPORTS, AND INLAND WATERWAYS IN THE UNITED STATES

FEDERAL, STATE AND LOCAL GOVERNMENT EXPENDITURES, FROM THE BEST AVAILABLE SOURCES

VARIOUS PERIODS AS SHOWN

Item (1)	Period (2)	Source of Information (3)	Expenditures (Millions) Capital Expenditures Detail (4)	Capital Expenditures Totals (5)	Interest on Bonds (6)	Operation and Maintenance Detail (7)	Operation and Maintenance Total (8)	Sub-Total (9)	Total (10)
A. Highways and Streets	1921-1957 C.Y.	U. S. Bureau of Public Roads		$63,294	$6,602		$40,061(a)		$109,857
B. Airways, Airports, and Direct Commercial Airline Subsidy									
1. Federal Airways Traffic Control and Navigation System	1925-1935 F.Y.	A.A.R.	N.A.			N.A.			
	1935-1959 F.Y.	A.A.R.	$ 549			$1,393		$1,942	
	Total		$ 549					$1,942	
2. Airports	? to 1952	C.A.A.	$4,000		N.A.	N.A.		$4,000	
	1952-1958 C.Y.		N.A.		N.A.	N.A.		N.A.	
	Total		$4,000					$4,000	
3. Commercial Airline Operating Subsidy	1939-1959 F.Y.	A.A.R.	-		-	$ 527		$ 527	
4. Total Air				$ 4,549	N.A.		$ 1,920		$ 6,469
C. Inland Waterways	1824-1958 F.Y.	U. S. Army Corps of Engineers		$ 1,646	-		$ 828		$ 2,474
D. Grand Total				$69,389	$6,602		$42,809		$118,800

N.A. Not Available
F.Y. Fiscal Year
C.Y. Calendar Year
(a) Excludes local traffic control and expenses for collecting and administering highway-user imposts.

Research Department - PRR
July 20, 1959

GOVERNMENTAL AID TO TRANSPORTATION COMPETITIVE WITH RAILROADS

and

CONTRIBUTIONS FOR SUPPORT OF GENERAL GOVERNMENT BY EACH TRANSPORTATION
(Includes Only Federal Excise, and State and Local User Taxes)
(Excludes Federal and State Income Taxes and Taxes on Carrier Owned Property)

1946 - 1957
(Millions)

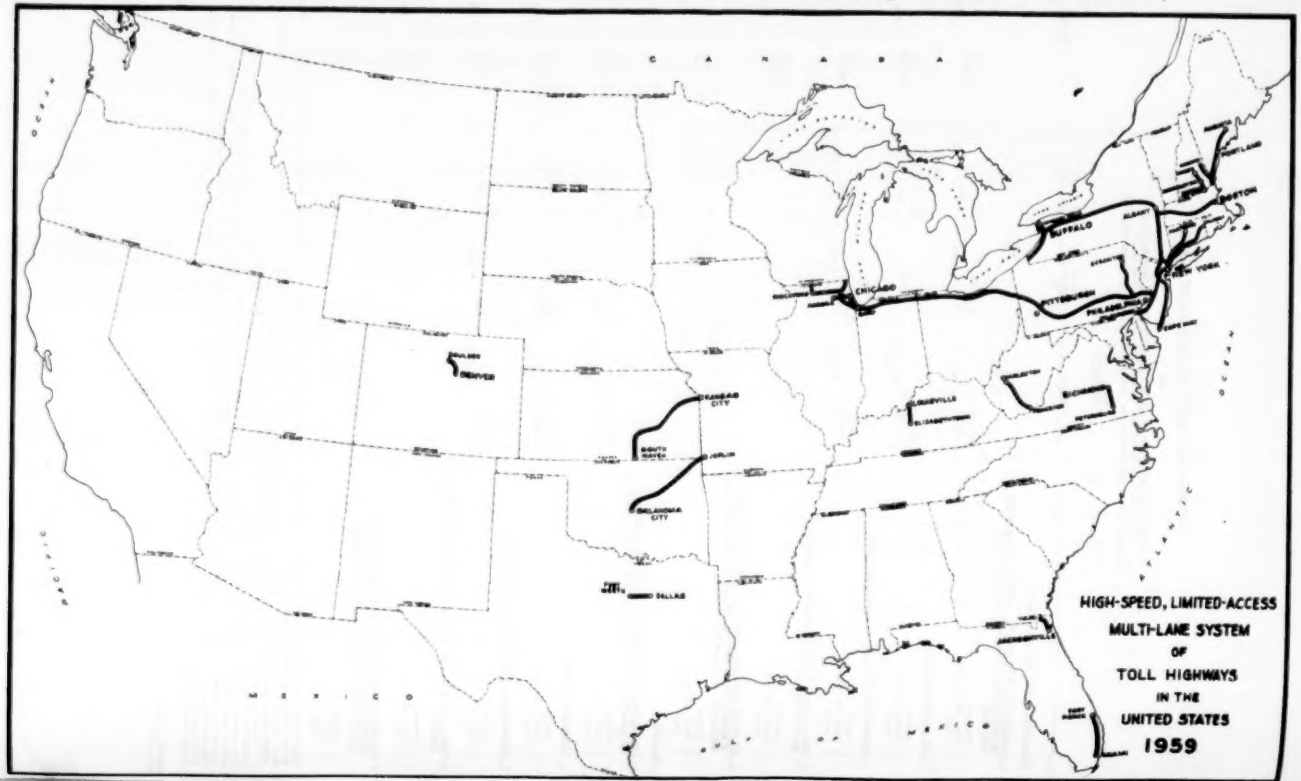
Item (1)	Highways (2)		Inland Waterways (3)		Air (4)		Total (5)	
I. 12-Year Period, 1946 - 1957, Inclusive								
A. Expenditures by government for construction, operation, and maintenance of tax-free facilities for rail competitors								
1. Federal	$ 8,065 (a)		$930 (c)		$2,505 (f)		$ 11,500	
2. State and local	59,828 (b)		N.A.		386 (g)		60,214	
3. Total		$67,893		$930		$2,891		$ 71,722
B. User imposts collected								
1. Federal	$22,666 (c)				$ 134 (h)		$ 22,800	
2. State and local	38,086 (d)		None		N.A.		38,086	
3. Total		$60,752				$ 134		$ 60,886
C. Net remaining for support of general government								
1. Federal	$14,601		$-930		$-2,371		$ 11,292	
2. State and local	-21,742		N.A.		- 386		-22,128	
3. Total		$-7,141		$-930		$-2,757		$-10,836
D. Total tax receipts from all sources for support of general government (i)								
1. Federal							$ 38,606	
2. State and local							229,002	
3. Total		-		-		-		$267,608
E. Per cent of total tax receipts for support of general government derived from net user imposts, after deduction expenditures for facilities furnished								
1. Federal							1.77%	
2. State and local							-9.66%	
3. Total		-		-		-		-1.25%
II. Year - 1957								
A. Expenditures by government for construction, operation and maintenance of tax-free facilities for rail competitors								
1. Federal	$ 2,065 (a)		$ 95 (c)		$ 356 (f)		$ 2,518	
2. State and local	7,874 (b)		N.A.		61 (g)		7,935	
3. Total		$ 9,939		$ 95		$ 419		$ 10,453
B. User imposts collected								
1. Federal	$ 3,518 (c)		None		$ 25 (h)		$ 3,543	
2. State and local	4,847 (d)		None		N.A.		4,847	
3. Total		$ 8,365		None		$ 25		$ 8,390
C. Net remaining for support of general government								
1. Federal	$ 1,453		$-95		$ -333		$ 1,025	
2. State and local	-3,027		N.A.		- 61		-3,088	
3. Total		$-1,574		$-95		$ -394		$ -2,063
D. Total tax receipts from all sources for support of general government								
1. Federal							$ 74,241	
2. State and local							27,421	
3. Total		-		-		-		$101,362
E. Per cent of total tax receipts for support of general government derived from net user imposts, after deducting expenditures for facilities furnished								
1. Federal							1.38%	
2. State and local							-10.60%	
3. Total		-		-		-		-2.03%

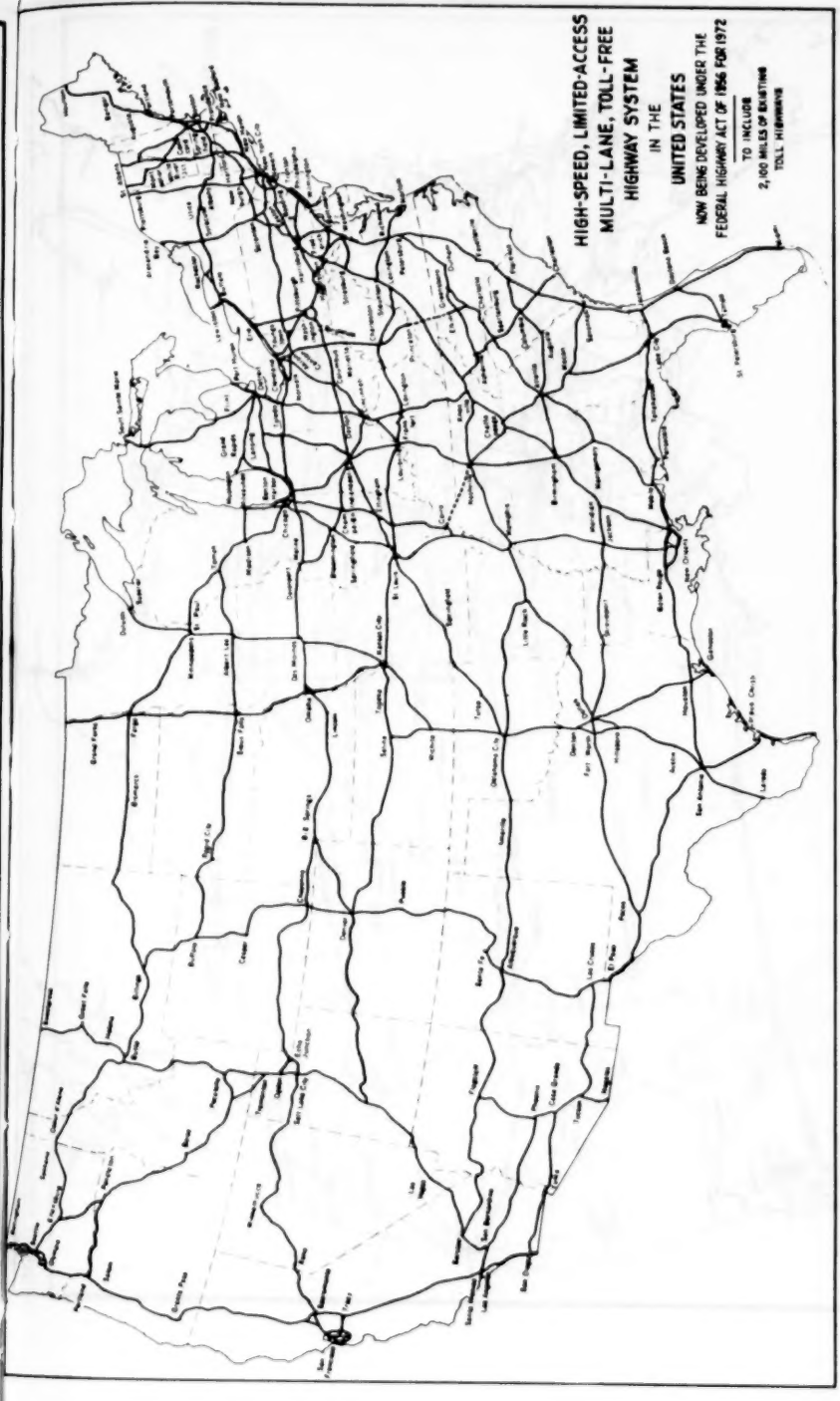
(a) Includes total Federal excise taxes transferred to the Highway Trust Fund in 1956 and 1957. Source: U. S. Bureau of Public Roads Table HF-1 and U. S. Treasury monthly receipts and expenditures statement.
(b) Doesn't include costs of local and county police and traffic control. Includes expenditures for toll facilities and expenses for collecting and administering highway-users imposts. Source: U. S. Bureau of Roads Tables HF-2 and S. F.2. 1957 Estimated.
(c) U. S. Bureau of Public Roads estimate of total Federal Excise Taxes paid by highway users. Tables E-5 and E-6.
(d) Includes Toll receipts. Source: U. S. Bureau of Roads - Tables SF-1. 1957 not given.
(e) Fifty percent of total Federal expenditures for all waterways based on information in the Committee on Public Works, 84th Congress, 2nd Session, H.R. 2369
(f) Includes Federal Grants-in-Aid to airports, Air Traffic Control System, cash subsidies to domestic air lines and expenditures by National Advisory Committee for Aeronautics. Doesn't include any Department of Defense expenditures, Weather Bureau services, Washington National Airports expenditures.
(g) Only sponsors matching funds for Federal Grants-in Aid under Federal Airport Act of 1946. Information on other state and local expenditures not available.
(h) Federal gasoline tax collected 1946 -1957.
(i) Includes employment taxes. Source: Tax Foundation, Inc.

Research Department - FRB
July 18, 1958

Page 88. Map, Paved intercity highway routes in the United States, 1930. (Map too large for readable reproduction in page size. Copy on file in committee office.)

Page 89. (Same as map on page 88 showing highway routes in 1959.) (Not reproduced for same reason.)

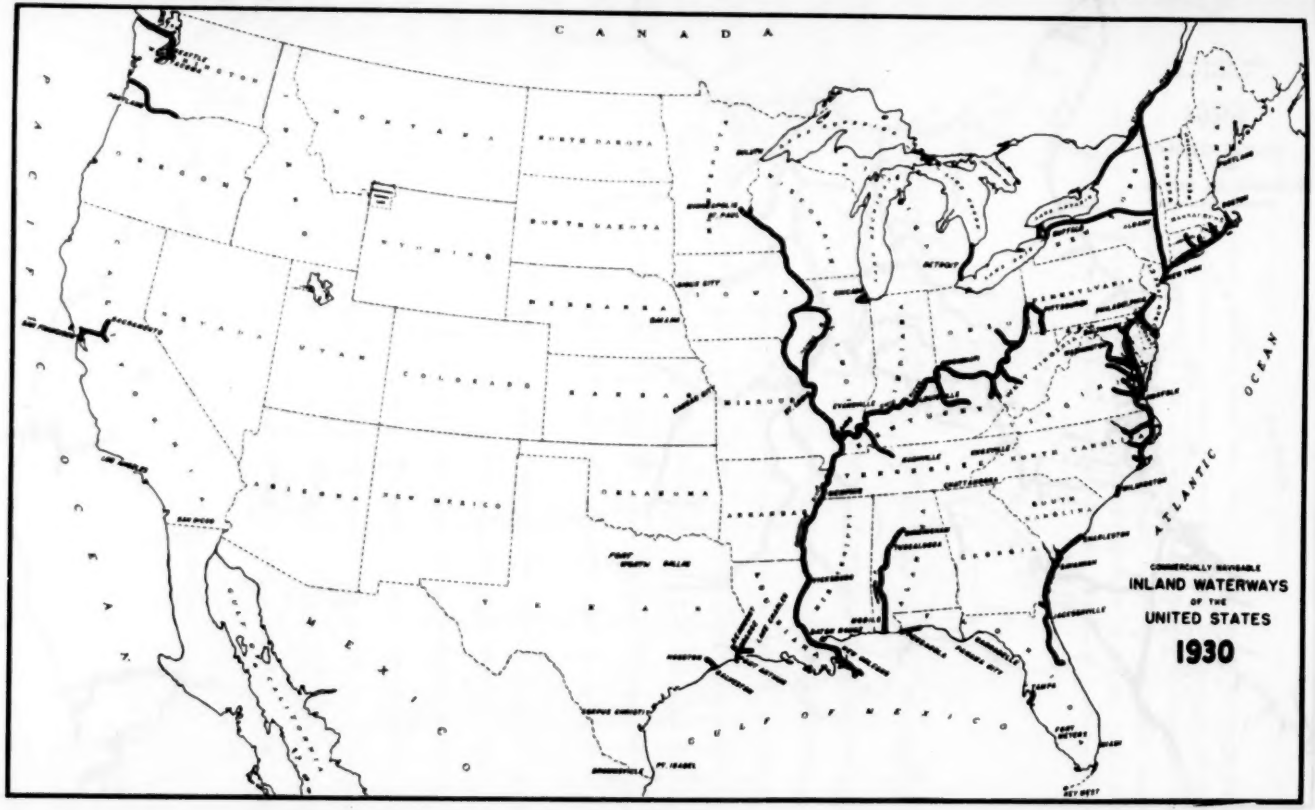


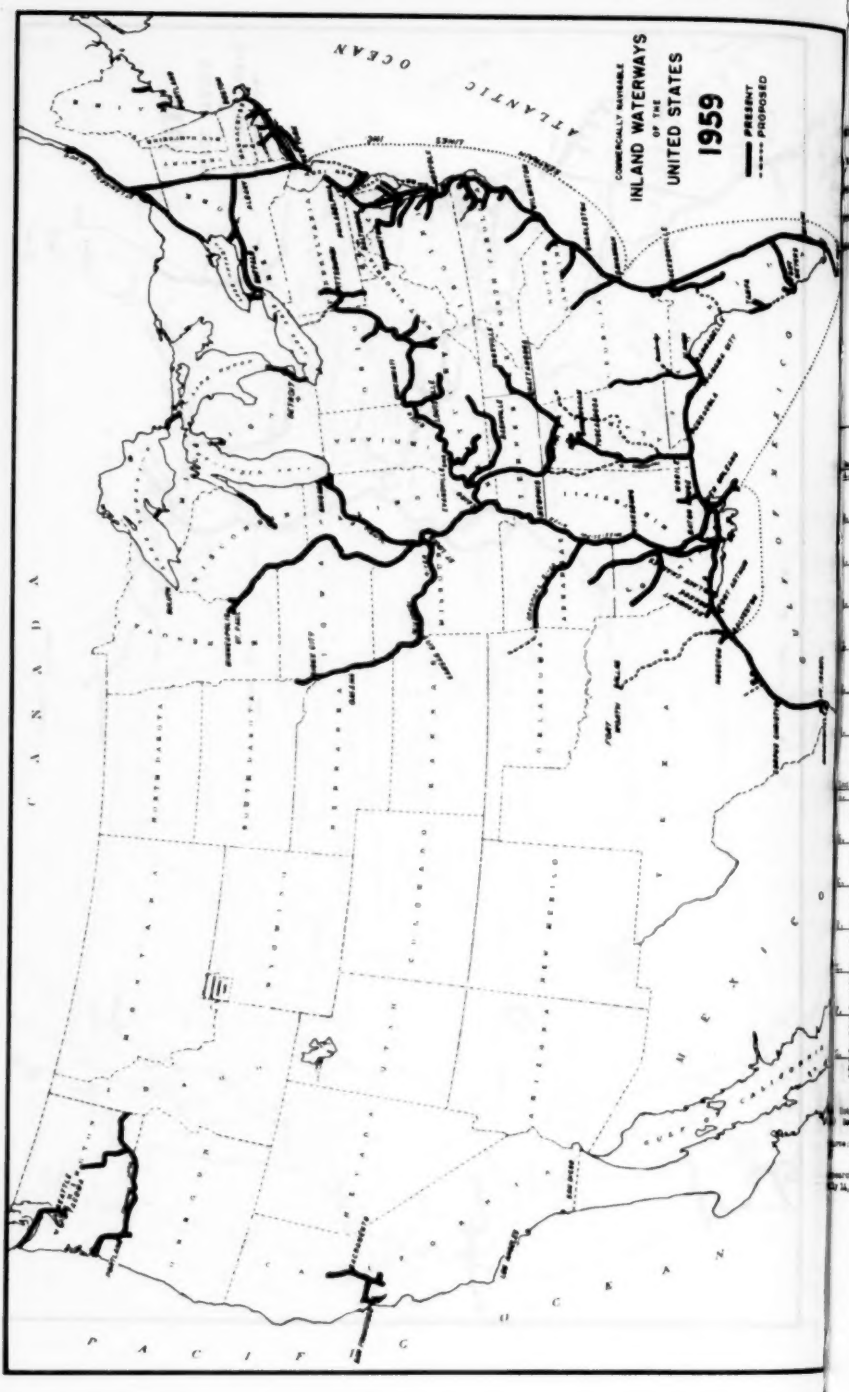

HIGH-SPEED, LIMITED-ACCESS
MULTI-LANE, TOLL-FREE
HIGHWAY SYSTEM
IN THE
UNITED STATES
NOW BEING DEVELOPED UNDER THE
FEDERAL HIGHWAY ACT OF 1956 FOR 1972
TO INCLUDE
2,000 MILES OF EXISTING
TOLL HIGHWAYS

81

Page 93. Map, Scheduled airlines in the United States, 1959. (Map too large for readable reproduction in page size. Copy on file in committee office.)

Page 93. Map, Scheduled airlines in the United States, 1959. (Map too large for readable reproduction in page size. Copy on file in committee office.)




COMMERCIALLY NAVIGABLE
INLAND WATERWAYS
OF THE
UNITED STATES
1959
PRESENT
PROPOSED
ATLANTIC OCEAN
CANADA
GULF OF MEXICO
PACIFIC OCEAN

Page 96. Map, Natural gas trunk pipelines in the United States, 1930. (Map too large for readable reproduction in page size. Copy on file in committee office.)

Page 97. (Same as map on p. 96 showing natural gas trunk pipelines in the U.S. for 1959.) (Not reproduced here for the same reason.)

Page 98. Map, Oil trunk pipelines in the United States, 1930. (Too large for readable reproduction in page size. Copy on file in committee office.)

Page 99. (Same as map on p. 98 showing oil trunk pipelines in the U.S. in 1959.) (Not reproduced here for the same reason.)

Page 100. Map, Railroads in the United States, 1930. (Too large for readable reproduction in page size. Copy on file in committee office.)

Page 101. (Same as map on p. 100 showing railroads in the United States in 1959.) (Not reproduced here for the same reason.)

RAILROAD OPERATIONS

UNION OF SOVIET SOCIALISTS REPUBLICS

COMPARED WITH

UNITED STATES

YEARS 1928 - 1957

Item (1)	1928 U.S.S.R. (2)	1928 U.S. (3)	1940 U.S.S.R. (4)	1940 U.S. (5)	1945 U.S.S.R. (6)	1945 U.S. (7)	1950 U.S.S.R. (8)	1950 U.S. (9)	1955 U.S.S.R. (10)	1955 U.S. (11)	1956 U.S.S.R. (12)	1956 U.S. (13)	1957 U.S.S.R. (14)	1957 U.S. (15)
Number														
A. Miles of line Operated														
1. U.S.S.R.	47,786		65,930		NA		72,642		75,003		NA		75,317	
2. U.S. Class I		240,304		233,678		226,696		223,779		220,676		220,221		219,087
B. Revenue Tons Originated (Billions)														
1. U.S.S.R.	128.2		451.2		NA		919.6		1,398.6		1,511.7		1,639.9	
2. U.S. Class I		1,181.9		1,009.4		1,721.9		1,354.2		1,396.3		1,447.4		1,340.3
C. Revenue Ton Miles (Billions)														
1. U.S.S.R.	64.0		264.2		715.1		412.6		665.0		739.3		830.8	
2. U.S. Class I		430.9		373.3		681.0		568.6		623.5		647.1		618.2
D. Passengers Carried (Millions)														
1. U.S.S.R.	291.1		1,342.5		NA		1,163.6		1,443.6		1,658.3		1,658.3	
2. U.S. Class I		740.5		455.9		891.1		488.2		432.0		428.5		431.7
E. Passenger Miles (Billions)														
1. U.S.S.R.	15.2		60.9		NA		54.7		67.9		88.5		91.3	
2. U.S. Class I		31.0		23.8		91.7		31.8		28.5		28.2		25.7
F. Traffic Units (a) (Billions)														
1. U.S.S.R.	96.4		404.1		NA		532.0		840.8		916.1		1,021.4	
2. U.S. Class I		498.1		439.0		864.1		557.2		640.6		703.5		692.0
G. Total Employment (Thousands)														
1. U.S.S.R.	NA		NA		NA		NA		2,901		NA		NA	
2. U.S. Class I		1,562		1,007		1,196		1,220		1,018		1,043		985
Indices (1940 = 100)														
A. Miles of line Operated														
1. U.S.S.R.	72.5		100.0		-		110.2		113.8		-		114.2	
2. U.S. Class I		106.7		103.8		97.0		95.8		94.4		94.2		93.8
B. Revenue Tons Originated (Billions)														
1. U.S.S.R.	28.4		100.0		-		140.8		213.8		231.4		251.1	
2. U.S. Class I		129.4		100.0		141.3		134.2		138.3		143.4		136.7
C. Revenue Ton Miles (Billions)														
1. U.S.S.R.	22.5		100.0		71.7		141.1		233.9		260.0		292.2	
2. U.S. Class I		116.0		100.0		182.4		152.9		167.0		173.3		165.6
D. Passengers Carried (Millions)														
1. U.S.S.R.	21.7		100.0		-		86.6		122.2		123.4		130.6	
2. U.S. Class I		171.5		100.0		196.8		107.4		95.4		94.8		90.8
E. Passenger Miles (Billions														
1. U.S.S.R.	25.0		100.0		-		89.8		144.3		145.3		156.5	
2. U.S. Class I		132.8		100.0		385.3		133.6		119.7		118.5		108.8
F. Traffic Units (a) (Billions)														
1. U.S.S.R.	23.0		100.0		-		131.0		207.0		225.6		251.5	
2. U.S. Class I		119.9		100.0		205.4		134.9		161.7		161.1		159.7
G. Total Employment														
1. U.S.S.R.	NA		NA		NA		NA		NA		NA		NA	
2. U.S. Class I		147.3		100.0		139.3		118.8		103.0		101.7		95.9

(a) Not available
Based on 1 traffic unit for each revenue ton mile, and 2 traffic units for each passenger mile.

Source: U.S.S.R. - "Basic Data on the Economy of the U.S.S.R." (publication in Russian), recent issue (1957) for 1957 - "Directory of Railway Officials and Year Book.
U.S. - "Statistics of Railways in the United States" Interstate Commerce Commission

Research Department - TRA
July 16, 1959

DISTRIBUTION OF TON-MILES OF INTERCITY TRAFFIC

UNION OF SOVIET SOCIALIST REPUBLICS

COMPARED WITH

UNITED STATES

YEARS 1940 - 1957

Item (1)	1940 U.S.S.R. (2)	1940 U.S. (3)	1945 U.S.S.R. (4)	1945 U.S. (5)	1950 U.S.S.R. (6)	1950 U.S. (7)	1954 U.S.S.R. (8)	1954 U.S. (9)	1955 U.S.S.R. (10)	1955 U.S. (11)	1956 U.S.S.R. (12)	1956 U.S. (13)	1957 U.S.S.R. (14)	1957 U.S. (15)
I Ton Miles (Billions)														
A. Railroads														
1. U.S.S.R.	284.3		215.1		412.7		586.9		665.1		741.8		830.9	
2. U.S.		379.2		690.8		596.9		556.6		631.4		655.9		626.2
B. Inland Waterways														
1. U.S.S.R.	24.6		12.5		31.4		42.7		46.2		48.5		52.4	
2. U.S.		22.4		29.7		51.7		82.5		97.7		109.3		114.6
C. Inland Seas or Great Lakes														
1. U.S.S.R.	16.3		19.7		27.2		38.8		47.2		56.7		63.5	
2. U.S.		95.6		113.0		111.7		91.2		118.8		110.7		117.2
D. Motor Trucks														
1. U.S.S.R.	6.1		3.0		13.8		25.7		29.1		33.3		42.3	
2. U.S.		62.0		66.9		172.9		214.6		226.2		253.8		260.9
E. Pipelines														
1. U.S.S.R.	NA		NA		3.4		NA		9.5		14.0		18.2	
2. U.S.		19.3		126.5		129.2		179.2		203.2		230.0		232.7
F. Total														
1. U.S.S.R.	331.3		250.3		498.5		694.1		797.1		894.3		1,007.3	
2. U.S.		618.5		1,030.9		1,062.4		1,124.1		1,277.3		1,359.7		1,351.6
II Percent of Total														
A. Railroads														
1. U.S.S.R.	85.8		85.9		82.4		84.6		83.4		83.0		82.5	
2. U.S.		61.3		67.3		56.2		49.5		49.4		48.2		46.3
B. Inland Waterways														
1. U.S.S.R.	7.4		5.0		6.3		6.2		5.8		5.4		5.2	
2. U.S.		3.6		2.9		4.9		7.4		7.7		8.0		8.5
C. Inland Seas or Great Lakes														
1. U.S.S.R.	5.0		7.9		5.6		5.6		5.9		6.3		6.3	
2. U.S.		15.5		11.0		10.5		8.1		9.3		8.1		8.7
D. Motor Trucks														
1. U.S.S.R.	1.1		1.2		2.8		3.7		3.7		3.7		4.2	
2. U.S.		10.0		6.5		16.3		19.1		17.7		18.7		19.3
E. Pipelines														
1. U.S.S.R.	-		-		0.7		-		1.2		1.6		1.8	
2. U.S.		9.6		12.3		12.1		15.9		15.9		16.9		17.2
F. Total														
1. U.S.S.R.	100.0		100.0		100.0		100.0		100.0		100.0		100.0	
2. U.S.		100.0		100.0		100.0		100.0		100.0		100.0		100.0

NA Not Available

NOTE: Excludes airlines U.S.S.R., data for which is not available.

Source: U.S.S.R. - "Basic Data on the Economy of the U.S.S.R."(publication in Russian)
U.S. - Annual Report of the Interstate Commerce Commission.

Research Department - FDR
July 11, 1958

DISPARITIANS OF TONS AND TON-MILES RELATIVITIES

by

DIFFERENT MODES OF TRANSPORTATION

Research Department - PnR
July 20, 1950

COMPARISON OF FUEL AND MAN-POWER REQUIREMENTS

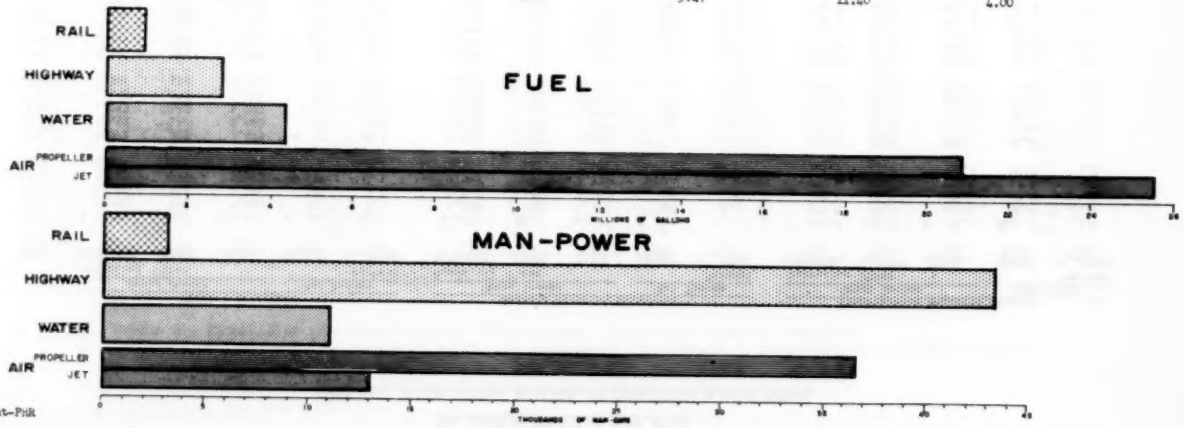
by

DIFFERENT MODES OF TRANSPORTATION

in

THE MOVEMENT OF 100,000 TONS OF FREIGHT BETWEEN NEW YORK AND SAN FRANCISCO

ITEM (1)	RAIL (2)	HIGHWAY (3)	WATER (4)	AIR PROPELLER (5)	AIR JET (6)
A FUEL					
1. Gallons	917,200	2,885,900	4,354,000	20,801,200	25,570,000
2. Ratio to Rail	1.00	3.15	4.75	22.77	26.79
B MAN-POWER					
1. Man-Days	3,220	43,416	11,158	36,708	13,008
2. Ratio to Rail	1.00	13.48	3.47	11.40	4.00



Research Department-PnR
July 20, 1950

FINANCIAL RESULTS

NET INCOME AS PERCENT OF GROSS INCOME

CLASS I AND EASTERN DISTRICT RAILROADS, AND PENNSYLVANIA RAILROAD COMPANY

YEARS 1929-1958
(Millions)

	Class I Railroads					Eastern District Railroads					Pennsylvania Railroad Company				
	Gross Income			Net Income		Gross Income			Net Income		Gross Income			Net Income	
Year	Operating Revenues	Other Income	Total	Amount	Percent of Gross	Operating Revenues	Other Income	Total	Amount	Percent of Gross	Operating Revenues	Other Income	Total	Amount	Percent of Gross
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
1929	$ 6,280	$360	$ 6,640	$ 897	13.5	$2,771	$212	$2,983	$ 392	13.1	$ 682.7	$48.8	$ 731.5	$101.4	13.9
1930	5,281	359	5,640	524	9.3	2,318	195	2,513	206	8.2	570.5	55.3	625.8	68.8	11.0
1931	4,188	306	4,494	135	3.0	1,841	166	2,007	32	1.6	448.1	48.0	496.1	19.9	4.0
1932	3,127	225	3,352	D 139	-4.1	1,395	137	1,532	D 44	-2.9	331.4	46.6	378.0	13.6	36.0
1933	3,095	211	3,306	D 6	-0.2	1,367	127	1,494	D 1	-0.1	324.7	41.6	366.3	19.3	5.3
1934	3,272	203	3,475	D 17	-0.5	1,435	126	1,561	D 4	-0.3	343.7	40.0	383.7	21.6	5.6
1935	3,452	188	3,640	8	0.2	1,508	92	1,600	18	1.1	367.8	36.4	404.2	23.8	5.9
1936	4,053	184	4,237	165	3.9	1,755	95	1,850	76	4.1	441.4	36.1	477.5	44.6	9.3
1937	4,166	175	4,341	98	2.3	1,780	93	1,873	39	2.1	455.9	37.6	493.5	27.3	5.5
1938	3,565	155	3,720	D 123	-3.3	1,449	76	1,525	D 78	-5.1	360.4	36.2	396.6	11.0	2.8
1939	3,995	161	4,156	93	2.2	1,696	81	1,777	44	2.5	430.9	36.9	467.8	32.0	6.8
1940	4,297	169	4,466	189	4.2	1,846	89	1,935	88	4.5	477.6	41.3	518.9	46.2	8.9
1941	5,347	177	5,524	500	9.1	2,292	91	2,383	193	8.1	614.0	41.7	655.7	52.4	8.0
1942	7,466	183	7,649	902	11.8	3,018	91	3,109	300	9.6	838.5	41.1	879.6	101.5	11.5
1943	9,055	201	9,256	873	9.4	3,494	100	3,594	284	7.9	979.8	42.5	1,022.3	85.4	8.4
1944	9,437	211	9,648	667	6.9	3,583	93	3,676	195	5.3	1,010.0	39.5	1,049.3	64.7	6.2
1945	8,902	205	9,107	450	4.9	3,304	94	3,398	116	3.4	936.5	43.0	979.5	49.0	5.0
1946	7,628	210	7,838	287	3.7	2,978	97	3,075	D 1	-0.3	822.0	44.9	866.9	D 8.5	-1.0
1947	8,685	229	8,914	479	5.4	3,417	109	3,526	81	2.3	903.3	53.6	956.9	7.3	0.8
1948	9,672	235	9,907	698	7.0	3,824	104	3,928	181	4.6	1,000.0	45.0	1,045.0	34.4	3.3
1949	8,580	254	8,834	438	5.0	3,320	117	3,437	89	2.6	848.2	54.9	903.1	12.5	1.4
1950	9,473	266	9,739	784	8.1	3,639	114	3,753	181	4.8	930.1	51.3	981.4	38.4	3.9
1951	10,391	273	10,664	693	6.5	3,977	103	4,080	155	3.8	1,044.4	36.0	1,080.4	28.7	2.5
1952	10,581	289	10,870	825	7.6	3,948	98	4,046	192	4.7	1,028.8	33.5	1,062.3	37.0	3.5
1953	10,664	309	10,973	903	8.2	4,032	96	4,128	209	5.1	1,034.4	34.2	1,068.6	37.0	3.5
1954	9,371	277	9,648	682	7.1	3,421	91	3,512	123	3.5	848.8	25.4	874.2	18.6	2.1
1955	10,106	271	10,377	927	8.9	3,737	89	3,826	239	6.2	935.0	25.3	960.3	41.2	4.3
1956	10,551	276	10,827	876	8.1	3,936	87	4,023	213	5.3	991.1	26.5	1,017.6	41.5	4.1
1957	10,491	289	10,780	737	6.8	3,877	90	3,967	124	3.1	987.3	27.4	1,014.7	19.1	1.9
1958	9,564	333	9,897	602	6.1	3,342	132	3,474	31	0.9	844.2	45.6	889.8	3.5	0.4

D - Deficit

Source: Class I and Eastern District Railroads - "Statistics of Railways in the United States", Interstate Commerce Commission.
Pennsylvania Railroad - Annual Reports to the Interstate Commerce Commission.

Research Department - FRB
July 18, 1960

CLASS I RAILROADS

COMPARISON OF WORKING CAPITAL, AFTER DEDUCTION OF ONE-YEAR MATURITIES,
WITH GROSS OPERATING REVENUES

CLASS I RAILROADS

COMPARISON OF WORKING CAPITAL, AFTER DEDUCTION OF ONE-YEAR MATURITIES, WITH GROSS OPERATING REVENUES

YEARS 1940 - 1958
(Millions of Dollars)

Year (1)	Operating Revenues (2)	Excess of Current Assets over Current Liabilities (3)	1-Year Maturities (4)	Working Capital Amount (5)	Working Capital Percent of Operating Revenues (6)	Materials and Supplies (7)	Working Capital less Materials and Supplies (8)
1940	$ 4,296.6	$ 548.2	$175.0	$ 373.2	8.7	$334.7	$ 38.5
1941	5,346.7	816.5	177.2	639.3	11.9	460.1	179.2
1942	7,465.8	1,263.4	301.3	962.1	12.9	503.9	458.2
1943	9,054.7	1,569.1	308.8	1,260.2	13.9	532.5	727.7
1944	9,436.8	1,662.7	228.4	1,434.3	15.2	603.9	830.4
1945	8,902.2	2,255.0	220.9	2,034.1	22.8	595.8	1,438.3
1946	7,627.7	1,913.5	232.8	1,680.7	22.0	653.9	1,026.7
1947	8,684.9	1,628.3	245.8	1,382.4	15.9	758.0	624.4
1948	9,671.7	1,597.8	331.5	1,266.3	13.1	852.2	414.2
1949	8,580.1	1,383.0	320.4	1,062.5	12.4	725.4	337.2
1950	9,473.1	1,531.7	308.5	1,223.2	12.9	725.8	497.3
1951	10,390.6	1,440.5	330.1	1,110.4	10.7	909.6	200.9
1952	10,580.8	1,515.4	317.6	1,197.9	11.3	839.8	358.1
1953	10,664.2	1,444.5	405.3	1,039.2	9.7	839.9	199.3
1954	9,370.8	1,507.1	341.9	1,165.3	12.4	698.0	467.2
1955	10,106.3	1,603.8	385.5	1,218.4	12.1	665.8	552.6
1956	10,550.9	1,436.5	382.6	1,053.9	10.0	734.0	319.9
1957	10,506.2	1,204.3	423.5	780.8	7.4	711.9	68.9
1958	9,564.1	1,388.4	388.1	1,000.3	10.5	582.8	417.5

NOTE: 1-year maturities 1940-1955 computed on basis of debt due in six months, as reported on December 31st of each year and June 30th of the subsequent year.

Source: Column 2 - "Statistics of Railways in the United States", Interstate Commerce Commission
Columns 3, 4 and 7 - I.C.C. statement M-125 - No restatement for changes in accounting classification beyond those reflected in M-125.

Research Department - PRR
July 14, 1959

THE PENNSYLVANIA RAILROAD COMPANY

COMPARISION OF WORKING CAPITAL, AFTER DEDUCTION OF ONE-YEAR MATURITIES, WITH GROSS OPERATING REVENUES

YEARS 1940 - 1958
(Millions of Dollars)

Year (1)	Operating Revenues (2)	Excess of Current Assets over Current Liabilities (3)	1-Year Maturities (4)	Working Capital Amount (5)	Working Capital Percent of Operating Revenues (6)	Materials and Supplies (7)	Working Capital less Materials and Supplies (8)
1940	$ 477.6	$ 40.0	$ 8.3	$ 31.7	6.64	$35.0	($ 3.3)
1941	614.0	59.8	10.7	49.1	8.00	58.3	(9.2)
1942	838.5	83.8	9.7	74.1	8.84	51.1	23.0
1943	979.8	78.9	16.4	62.5	6.38	45.1	17.4
1944	1,010.0	101.4	11.7	89.7	8.88	47.2	42.5
1945	936.5	144.6	12.1	132.5	14.15	45.5	87.0
1946	822.0	96.8	12.6	84.2	10.24	52.8	31.4
1947	903.3	75.0	41.2	33.8	3.74	63.5	(29.7)
1948	1,000.0	154.1	18.5	135.6	13.56	69.4	66.2
1949	848.2	136.0	20.5	115.5	13.62	68.5	47.0
1950	930.1	143.7	23.1	120.6	12.97	65.7	54.9
1951	1,044.4	150.9	37.5	113.4	10.86	89.6	23.8
1952	1,028.8	150.9	35.1	115.8	11.26	68.6	47.2
1953	1,034.4	132.7	36.4	96.3	9.31	69.1	27.2
1954	848.8	133.9	37.5	96.4	11.36	63.9	32.5
1955	935.0	112.2	36.4	75.8	8.11	56.3	19.5
1956	991.1	97.8	38.0	59.8	6.03	67.1	(7.3)
1957	987.3	75.8	38.6	37.2	3.77	59.0	(21.8)
1958	844.2	87.0	39.5	47.5	5.63	53.7	(6.2)

( ) Deficit

NOTE: Excess of current assets over current liabilities for years 1940 to 1957 inclusive restated on basis of accounting regulations effective January 1, 1958.

Source: Financial Department - PRR

Research Department - PRR
July 14, 1959

WORKING CAPITAL COVERAGE OF PAYROLL

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD

WORKING CAPITAL COVERAGE OF PAYROLL

CLASS I RAILROADS AND PENNSYLVANIA RAILROAD

YEARS 1940 - 1958
(Millions of Dollars)

	Class I Railroads			The Pennsylvania Railroad Company		
Year	Working Capital(a) December 31st	Average Monthly Payroll	Months Covered	Working Capital(a) December 31st	Average Monthly Payroll	Months Covered
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1940	$ 38.5	$163.7	0.24	(3.3)	$17.9	(0.18)
1941	179.2	194.7	0.92	(9.2)	23.0	(0.40)
1942	458.2	244.4	1.87	23.0	29.3	0.78
1943	727.7	293.4	2.84	17.4	34.8	0.50
1944	830.4	321.1	2.59	42.5	37.8	1.12
1945	1,438.3	321.7	4.47	87.0	37.4	2.33
1946	1,026.7	347.5	2.95	31.4	39.9	0.79
1947	624.4	362.5	1.72	(29.7)	41.1	(0.72)
1948	414.2	397.4	1.04	66.2	43.4	1.53
1949	337.2	368.3	0.92	47.0	37.6	1.25
1950	497.3	385.0	1.29	54.9	41.8	1.31
1951	200.9	444.7	0.45	23.8	48.1	0.49
1952	358.1	444.8	0.81	47.2	46.5	1.02
1953	199.3	443.9	0.45	27.2	47.0	0.58
1954	467.2	404.6	1.15	32.5	38.9	0.84
1955	552.6	416.1	1.33	19.5	42.4	0.46
1956	319.9	443.7	0.72	(7.3)	45.2	(0.16)
1957	68.9	446.5	0.15	(21.8)	46.0	(0.47)
1958	417.5	410.8	1.02	(6.2)	39.5	(0.16)

( ) Deficiency

(a) After deduction of one-year maturities and excluding materials and supplies

Source: Class I Railroads - I.C.C. Statements M-300 and M-125 - (No restatement for changes in accounting classification beyond those reflected in M-125.)
Pennsylvania Railroad - Form "A" Report to I.C.C. - Restated to conform to accounting changes effective 1/1/58

PENNSYLVANIA RAILROAD

NET INCREASE IN CASH

AS RESULT OF POST WORLD WAR II ABANDONMENT PROGRAM

Year (1)	From Sale of Equipment and Dismantling Program: MW & S Scrap (2)	From Sale of Equipment and Dismantling Program (3)	Total (4)	By Avoidance of Purchase of New Material: Rail (5)	Equipment (6)	Total (7)	Grand Total (8)
1946	-	$ 1,873,529	$ 1,873,529	-	$ 438,928	$ 438,928	$ 2,312,457
1947	-	5,072,940	5,072,940	-	5,012,850	5,012,850	10,085,790
1948	-	7,494,030	7,494,030	-	4,711,683	4,711,683	12,205,713
1949	-	7,820,233	7,820,233	-	6,218,260	6,218,260	14,038,493
1950	-	7,602,132	7,602,132	-	6,044,836	6,044,836	13,646,968
1951	-	6,322,347	6,322,347	-	3,583,078	3,583,078	9,905,425
1952	-	12,162,141	12,162,141	-	3,365,668	3,365,668	15,527,809
1953	-	7,479,569	7,479,569	-	1,476,673	1,476,673	8,956,242
1954	$ 116,600	3,143,755	3,260,355	$ 465,400	1,145,978	1,611,378	4,871,733
1955	1,614,133	12,903,078	14,517,211	2,072,000	5,705,475	7,777,475	22,294,686
1956	3,078,685	12,587,172	15,665,857	1,755,000	3,182,450	4,937,450	20,603,307
1957	1,819,333	4,894,829	6,714,162	554,667	874,830	1,429,497	8,143,659
1958	848,146	4,952,973	5,801,119	1,382,821	6,142,282	7,525,103	13,326,222
Total	$7,476,897	$94,308,728	$101,785,625	$6,229,888	$47,902,991	$54,132,879	$155,918,504

Source: Chief Engineer - PRR

Research Department - PRR
July 14, 1959

THE PENNSYLVANIA RAILROAD COMPANY

CASH REALIZED THROUGH LIQUIDATION OF ASSETS

THE PENNSYLVANIA RAILROAD COMPANY

CASH REALIZED THROUGH LIQUIDATION OF ASSETS

POST WORLD WAR II PROGRAM

Item (1)	Year (2)	Cash Realized (3)	
Pennsylvania Terminal Real Estate Company (Hotel Pennsylvania, New York)	1948		$ 3,800,000.
" " " " " " " " "	1949		11,800,000.
Point Property, Pittsburgh	1949		4,250,000.
Pennsylvania Railroad Convertible Debentures and General Mortgage Bonds - Sale of reacquired bonds held in treasury	1949		14,000,000.
Philadelphia (Bulletin Company)	1951		1,065,000.
Pennsylvania Greyhound Stock	1954		10,500,000.
Philadelphia (City of Philadelphia)	1954		1,000,000.
" - Suburban Station	1954	$7,000,000.	
Less: Balance due on Mortgage		3,100,000.	3,900,000.
" - Pennsylvania Tower (6 Penn Center)	1954	$1,500,000.	
Less: Balance due on Mortgage		1,500,000.	
" - General Public Warehouse	1954		2,950,000.
" - National Refrigerator Terminal	1954	$1,450,000.	
Less: Balance due on Mortgage		1,262,500.	187,500.
Water Companies and related facilities in Pennsylvania and Delaware	1955		5,500,000.
Philadelphia - Sheraton Hotel	1955		1,500,000.
Pittsburgh - Land under warehouse	1955		1,700,000.
Virginia Ferry Corporation	1956		6,563,000.
Philadelphia (3 Penn Center)	1956		1,100,000.
Harborside Warehouse Company	1958	$4,750,000.	
Less: Balance due on Mortgage		4,500,000.	250,000.
Philadelphia (City of Philadelphia)	1958		1,190,000.
		Total	$ 71,255,500.
Balance account miscellaneous real estate sales of less than $1,000,000. - 1946 - 1958.			39,544,500.
		Grand Total	$ 110,800,000.

Source: Financial Department - PRR

Research Department - PRR
July 15, 1959

43755 O—59——36

AGE OF FREIGHT CARRYING CARS USED IN INTERCHANGE SERVICE(a)

OWNED OR LEASED BY CLASS I RAILWAYS

JANUARY 1, 1958

Year Built (1)	Box (2)	Flat (3)	Stock (4)	Gondola (5)	Hopper (6)	Covered Hopper (7)	Tank (8)	Refrigerator (9)	Misc. (10)	Other (11)	Total (12)	Age Group Years (13)	Number (14)	Percent of Total (15)
1905 & Previous	20	692	-	137	4,597	74	1	-	84	-	5,609			
1906	397	442	483	186	5,043	-	27	42	67	-	6,707			
1907	195	246	45	452	6,284	1	38	94	37	70	7,422			
1908	31	-	6	140	171	4	11	19	-	-	382			
1909	794	514	7	252	5,605	-	44	-	5	1	7,244			
1910	440	534	209	183	9,077	4	413	8	90	-	10,976			
1911	231	71	25	108	1,382	-	113	-	-	-	1,930			
1912	979	498	-	135	5,580	-	279	25	34	32	7,522			
1913	923	369	814	973	11,346	1	96	1	808	3	15,534			
1914	228	484	397	333	2,924	1	217	-	411	-	4,969			
1915	136	44	272	1,044	4,890	-	381	-	7	210	7,183			
1916	2,268	550	1,187	2,489	8,539	20	74	1	770	273	16,151	Over 30	416,366	23.87
1917	1,138	181	920	726	2,307	211	642	42	14	108	6,055			
1918	2,117	11	913	918	3,800	2	552	12	171	-	7,916			
1919	10,195	83	1,138	1,903	6,412	186	51	474	733	74	20,849			
1920	3,096	183	68	201	5,726	9	56	638	3	5	9,985			
1921	1,418	83	1,578	2,077	2,972	-	73	78	36	4	8,319			
1922	11,357	644	1,703	5,602	13,380	349	-	1,280	1,164	24	37,303			
1923	16,775	2,042	5,163	3,377	15,958	50	456	1,386	2,168	18	47,373			
1924	31,933	2,010	2,838	2,898	8,600	-	469	1,321	1,362	10	51,441			
1925	25,740	1,345	2,700	9,396	2,368	200	185	3,981	470	5	46,390			
1926	22,914	1,180	982	13,288	8,711	178	6	763	2,436	71	50,529			
1927	15,325	1,645	2,787	8,371	7,327	96	208	1,432	1,189	315	38,695			
1928	11,428	3,341	2,110	4,391	7,001	201	185	994	2,204	25	31,182			
1929	28,405	3,098	1,940	10,867	10,521	529	-	474	625	296	56,755			
1930	34,943	2,770	1,539	13,366	8,185	147	99	474	2,280	224	64,027	26 to 30	162,989	9.35
1931	3,788	472	293	1,471	1,863	1	-	516	83	36	9,002			
1932	907	142	495	51	423	3	-	-	-	2	2,023			
1933	1,644	18	49	50	-	-	-	-	-	-	1,761			
1934	9,403	1,594	82	2,592	9,247	204	-	-	58	32	23,212			
1935	1,081	18	-	974	4,184	96	-	-	-	17	6,370			
1936	17,159	749	399	5,268	10,681	470	1	-	79	-	34,806			
1937	29,587	1,525	522	13,000	20,707	245	194	1,062	602	24	67,468			
1938	7,069	705	534	3,144	704	373	1	-	1,354	-	13,884			
1939	9,266	608	200	2,710	6,534	308	-	-	1,011	17	20,652			
1940	27,349	482	388	5,711	21,247	2,853	-	432	228	40	58,078			
1941	41,366	1,147	150	11,758	15,052	841	-	-	751	24	71,089	16 to 20	221,016	12.67
1942	30,422	2,515	-	9,459	12,790	1,237	446	199	238	15	57,311			
1943	771	2,132	-	9,333	13,281	563	1	-	466	68	26,635			
1944	17,803	785	299	4,588	15,753	318	-	-	477	76	40,053			
1945	20,377	1,105	238	6,279	7,958	296	-	-	268	-	36,521	11 to 15	194,319	11.14
1946	18,239	485	-	4,979	10,120	3,171	-	2	127	-	37,143			
1947	30,291	753	-	2,883	17,387	1,781	-	427	485	-	53,967			
1948	39,498	971	149	13,117	39,218	1,994	10	154	488	47	95,146			
1949	15,289	1,701	500	18,114	35,536	4,722	252	247	617	17	76,995			
1950	20,726	2,324	497	6,864	4,510	3,125	-	-	290	-	38,334	6 to 10	354,693	20.34
1951	41,075	2,827	303	21,194	11,211	3,566	-	248	1,187	26	81,617			
1952	20,651	1,130	693	13,425	22,302	2,410	10	599	1,362	35	62,599			
1953	20,413	1,179	-	16,283	19,232	5,361	238	531	1,444	23	64,930			
1954	11,642	2,125	-	3,926	3,575	3,183	61	496	958	-	25,568			
1955	18,376	910	100	1,643	3,569	3,409	156	928	661	-	29,750	1 to 5	260,988	14.97
1956	28,743	2,442	300	6,787	13,935	4,607	10	345	936	95	56,352			
1957	32,095	781	-	10,219	30,548	7,550	13	770	2,588	-	84,564			
TOTAL	738,406	54,748	39,440	277,531	521,383	54,182	6,253	19,779	33,944	2,314	1,743,984			
AVERAGE AGE	17.85	21.34	31.36	17.72	20.34	9.36	33.37	25.46	21.70	30.47	18.99			

(a) Based on Date Originally Built, Excludes box cars equipped for passenger train service.

Source: American Railway Car Institute

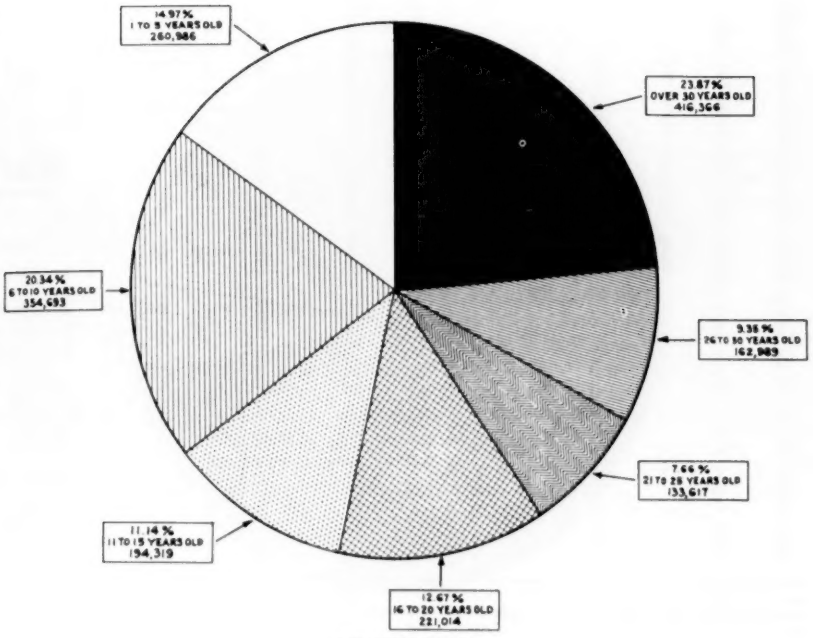
Research Department - FRB
July 30, 1959

AGE OF FREIGHT CARRYING CARS USED IN INTERCHANGE SERVICE

OWNED OR LEASED BY CLASS I RAILROADS

January 1, 1958

Based on Date Originally Built



TOTAL OWNED 1,743,984

AVERAGE AGE 18.89 YEARS

SOURCE - "RAILROAD CAR FACTS" AMERICAN RAILWAY CAR INSTITUTE

Research Department, P.R.R. 7-17-59

AGE OF PASSENGER TRAIN CARS(a)

OWNED OR LEASED BY CLASS I RAILROADS AND PULLMAN COMPANY

JANUARY 1, 1958

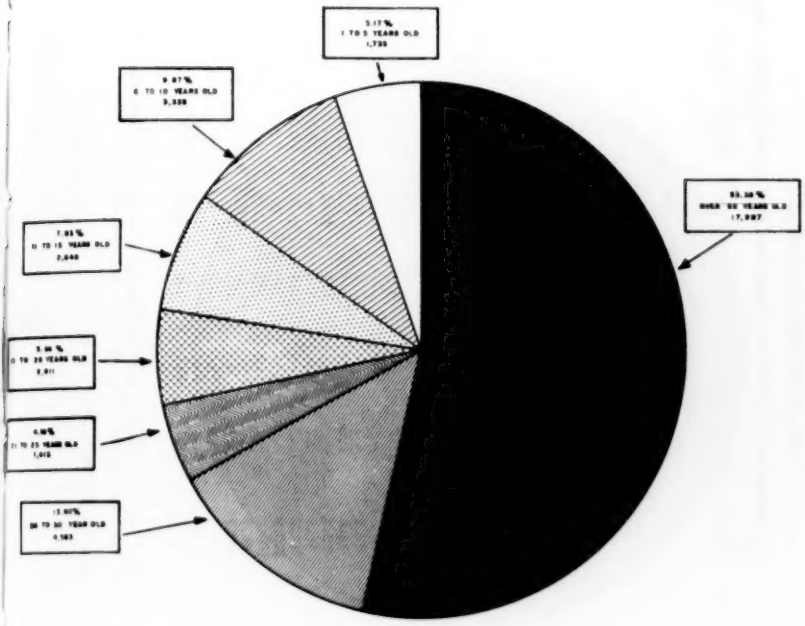
Year Built (1)	Passenger Carrying: Coach Coach (2)	Coach Commuter (3)	Sleeping and Combination (4)	Parlor Club, etc. (5)	Dining (6)	Head-End: Baggage and Express (7)	Mail and Combination (8)	Other (9)	TOTAL (10)	Age Group: Years (11)	Number (12)	Percent (13)
1905 & Previous	35	21	-	-	-	49	7	-	112			
1906	24	4	-	-	-	32	4	-	64			
1907	102	9	-	3	-	24	7	-	155			
1908	90	1	-	-	4	37	10	-	142			
1909	99	20	-	-	8	72	10	-	209			
1910	257	79	56	7	29	283	61	4	779			
1911	235	17	67	-	9	295	176	2	801			
1912	329	30	26	7	9	234	46	-	681			
1913	324	71	119	9	22	234	148	13	910			
1914	458	91	38	7	16	531	278	7	1426			
1915	195	56	51	14	4	161	61	15	569			
1916	149	44	43	12	17	241	73	9	585	Over 30	17,997	53.39
1917	331	69	74	1	20	379	87	3	964			
1918	143	17	8	-	13	161	99	5	446			
1919	44	44	-	-	3	40	1	3	133			
1920	144	6	31	-	3	208	10	-	402			
1921	202	21	42	9	9	324	49	5	628			
1922	103	21	34	-	41	115	57	5	596			
1923	605	43	103	9	77	284	90	4	1173			
1924	628	60	231	34	68	692	124	4	1823			
1925	535	49	459	24	53	606	98	4	1732			
1926	660	51	246	40	69	776	66	4	2162			
1927	815	102	81	43	57	292	68	-	1440			
1928	528	51	79	8	43	553	148	1	1390			
1929	318	71	295	29	22	983	116	3	1733			
1930	545	32	151	46	74	240	79	2	1169	26 to 30	4,583	13.60
1931	124	39	-	2	2	71	15	-	251			
1932	34	-	-	3	9	4	-	-	60			
1933	-	-	-	5	2	103	1	-	111			
1934	221	10	-	2	-	210	13	-	456			
1935	71	13	1	6	9	47	-	-	144	21 to 25	1,413	4.19
1936	88	11	8	7	12	21	7	-	147			
1937	233	9	9	24	27	183	38	-	515			
1938	178	23	171	17	37	71	11	-	508			
1939	82	5	79	28	38	79	2	-	309			
1940	82	9	115	11	28	21	15	-	279	16 to 20	2,011	5.97
1941	212	9	45	24	31	218	5	-	549			
1942	87	6	148	9	10	130	16	-	366			
1943	-	8	39	-	10	289	4	-	340			
1944	11	-	-	2	3	388	7	-	411			
1945	7	-	-	-	11	357	34	-	409	11 to 15	2,660	7.91
1946	307	-	5	4	26	285	7	-	634			
1947	338	38	34	47	83	309	43	-	792			
1948	780	31	288	87	121	98	29	-	1034			
1949	190	6	514	43	135	14	24	-	934			
1950	487	7	379	33	70	109	43	-	1128	6 to 10	3,328	9.87
1951	90	3	34	21	12	26	4	-	173			
1952	25	17	27	20	13	38	1	-	146			
1953	141	11	35	-	4	142	3	-	336			
1954	175	11	101	16	2	29	19	-	353			
1955	278	17	29	23	34	50	-	-	431	1 to 5	1,735	5.15
1956	212	11	56	13	9	85	-	-	386			
1957	54	-	1	-	7	138	42	-	243			
TOTAL	12,401	1,341	4,997	736	1,333	11,166	2,439	93	33,709			
AVERAGE AGE	28.72	32.73	20.80	20.79	20.96	29.03	34.75	39.98	28.49			

(a) Based on data originally built. Includes box cars equipped for passenger train service.

Source: American Railway Car Institute

Research Department - PAT
July 30, 1959

AGE OF PASSENGER TRAIN CARS
Owned or Leased by Class I Railroads and Pullman Company
January 1, 1958
Based on Date Originally Built



TOTAL OWNED 33,707

AVERAGE AGE 26.45 YEARS

SOURCE: "Railroad Car Facts", American Railway Car Institute.

AGE OF PASSENGER TRAIN CARS(a)

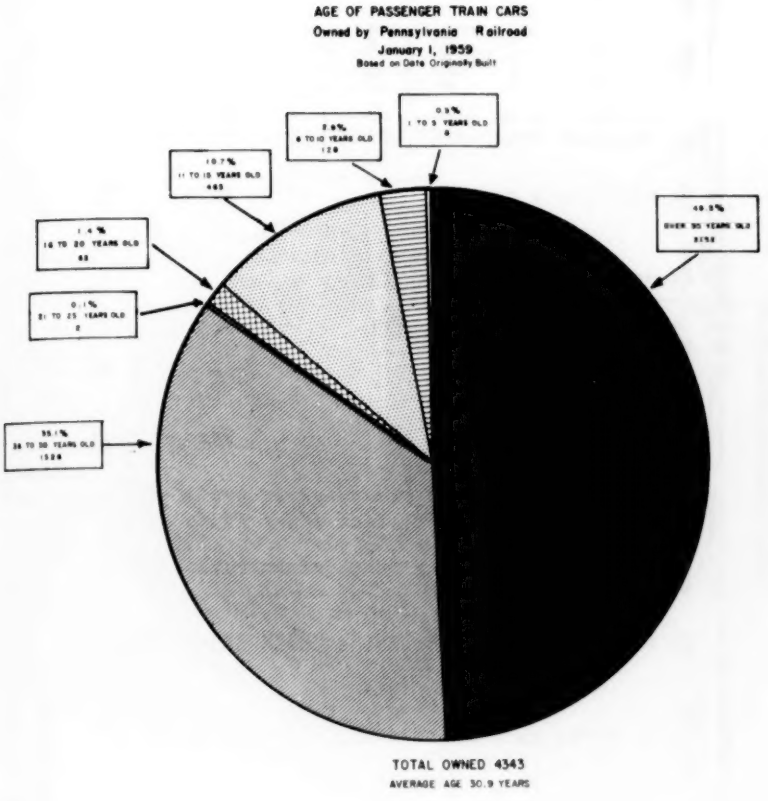
OWNED BY THE PENNSYLVANIA RAILROAD

Item (1)	Average Age of Passenger Train Cars as of January 1, 1959 - Years: Over 30 (2)	26 - 30 (3)	21 - 25 (4)	16 - 20 (5)	11 - 15 (6)	6 - 10 (7)	0 - 5 (8)	Grand Total (9)	Average Age by Class of Car (10)
A. Number									
1. Coaches	675	245	-	35	116	34	-	1,105	34.4
2. Tubular Train							8	8	2.0
3. Coach Combination	47	-	-	1	5	4	-	57	35.8
4. Parlor	96	2			9	22		129	26.1
5. Sleeping	325	-	-	9	335	-	-	669	22.4
6. Dining	83	1	2	16	-	44	-	146	28.5
7. Cafe	15	5	--	1	-	14	-	35	26.5
8. Postal	12	-	-	-	-	-	-	12	47.5
9. Baggage Mail	152	-	-	-	-	-	-	152	44.8
10. Baggage Express	722	42	-	-	-	-	-	764	34.1
11. Horse Express	18	47	-	-	-	-	-	65	33.3
12. Refrigerator Express	-	211	-	-	-	-	-	211	29.0
13. Freight Type	7	973	-	-	-	10	-	990	29.3
14. Total	2,152	1,526	2	62	465	128	8	4,343	30.9
B. Percent of Grand Total									
1. Coaches	61.0	22.2	-	3.2	10.5	3.1	-	100.0	
2. Tubular Train	-	-	-	-		-	100.0	100.0	
3. Coach Combination	82.4	-	-	1.8	8.8	7.0	-	100.0	
4. Parlor	74.4	1.6	-	-	7.0	17.0	-	100.0	
5. Sleeping	48.6	-	-	1.3	50.1	-	-	100.0	
6. Dining	56.8	0.7	1.4	11.0	-	30.1	-	100.0	
7. Cafe	42.8	14.3	-	2.9	-	40.0	-	100.0	
8. Postal	100.0	-	-	-	-	-	-	100.0	
9. Baggage Mail	100.0	-	-	-	-	-	-	100.0	
10. Baggage Express	94.5	5.5	-	-	-	-	-	100.0	
11. Horse Express	27.7	72.3	-	-	-	-	-	100.0	
12. Refrigerator Express	-	100.0	-	-	-	--	-	100.0	
13. Freight Type	0.7	98.3	-	-	-	1.0	-	100.0	
14. Total	49.5	35.1	0.1	1.4	10.7	2.9	0.3	100.0	

(a) Based on date originally built. Excludes suburban service electric multiple unit cars, shown separately, 10 rail motor cars and 28 cars in joint service with the Hudson and Manhattan.

Source: Records of the Chief Mechanical Officer - PRR

Research Department - PRR
July 21, 1959



SOURCE: Chief Mechanical Officer, PRR

Research Department, PRR 7-20-59

Research Department - PRR
July 21, 1959

PENNSYLVANIA RAILROAD

SUBURBAN SERVICE ELECTRIC MULTIPLE UNIT CARS

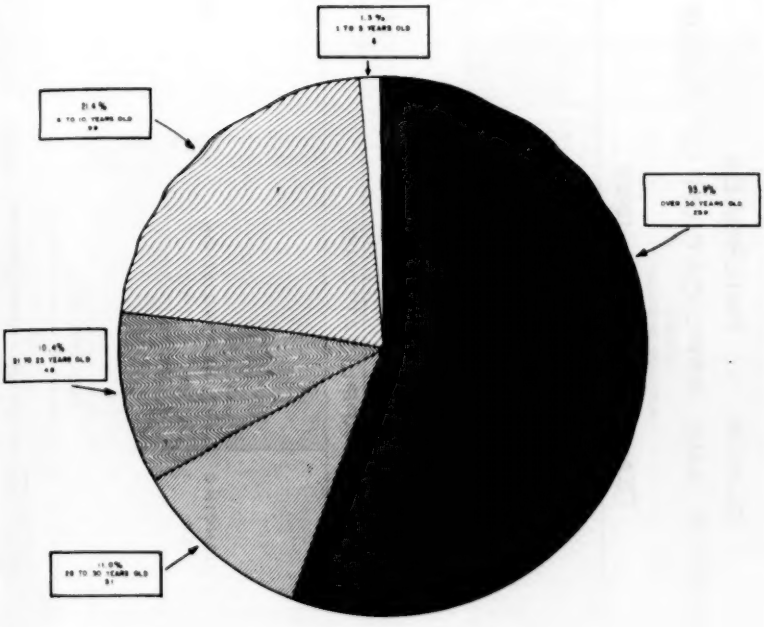
	Ownership Each Year						Cars in Service July 1, 1939						
	Passenger Carrying Cars				Seating Capacity Coach		Number placed in Service each Year					Age Group		
Year	Coach	Combination	Mail, Express and Baggage	Total	Average	Total	Coach	Combination	Mail, Express and Baggage	Total	Present Age	Years	Number	Percent of Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1915	82	8	2	92	72	6,320	69	2	1	72	44			
1918	102	8	4	114	72	7,760	17		0	17	41			
1922	117	8	4	129	72	8,840	13			13	37			
1924	117	9	4	130	72	8,892		1		1	35			
1926	125	9	4	138	72	9,468	8			8	33	Over 30	259	55.9
1927	229	9	9	247	72	16,956	104		3	107	32			
1928	258	11	10	279	72	19,124	1	2		3	31			
1929	301	11	11	323	72	22,220	38			38	30			
1930	318	11	11	340	72	23,444	11			11	29			
1931	318	11	11	340	72	23,444					28			
1932	355	14	11	380	72	26,228	37	2		39	27	26 to 30	51	11.0
1933	355	14	12	381	72	26,228			1	1	26			
1934	392	19	15	426	72	29,092	35	5	2	42	25			
1935	392	19	15	426	72	29,092					24			
1936	392	19	15	426	72	29,092					23	21 to 25	48	10.4
1937	398	19	15	432	72	29,524	6			6	22			
1938	398	19	15	432	72	29,524					21			
												Over 20	358	80.8
1939	398	19	15	432	72	29,524					20			
1940	398	19	15	432	72	29,524					19			
1941	398	19	15	432	72	29,524					18	16 to 20	0	0.0
1942	398	19	15	432	72	29,524					17			
1943	398	19	15	432	72	29,524					16			
1944	398	19	15	432	72	29,524					15			
1945	398	19	15	432	72	29,524					14			
1946	398	19	15	432	72	29,524					13	11 to 15	0	0.0
1947	398	19	15	432	72	29,524					12			
1948	398	19	15	432	72	29,524					11			
1949	398	19	15	432	72	29,524					10			
1950	444	19	15	478	72	32,836	54			54	9			
1951	447	19	15	481	72	33,052	28	1		29	8	6 to 10	99	21.4
1952	447	19	15	481	72	33,052	15			15	7			
1953	443	18	12	473	72	32,724	1			1	6			
1954	442	13	10	465	72	32,392					5			
1955	441	13	9	463	72	32,320					4			
1956	441	13	9	463	72	32,320					3	1 to 5	6	1.3
1957	437	13	8	458	72	32,032					2			
1958	443	13	7	463	73	32,791	6			6	1			
Total							443	13	7	463		27.5(a)	463	100.0

(a) Average age of all cars

Source: Supervisor of Equipment Expenditures - PRR

Research Department - PRR
July 20, 1950

AGE OF SUBURBAN SERVICE
ELECTRIC MULTIPLE UNIT CARS
Owned by Pennsylvania Railroad
Cars in Service July 1, 1959



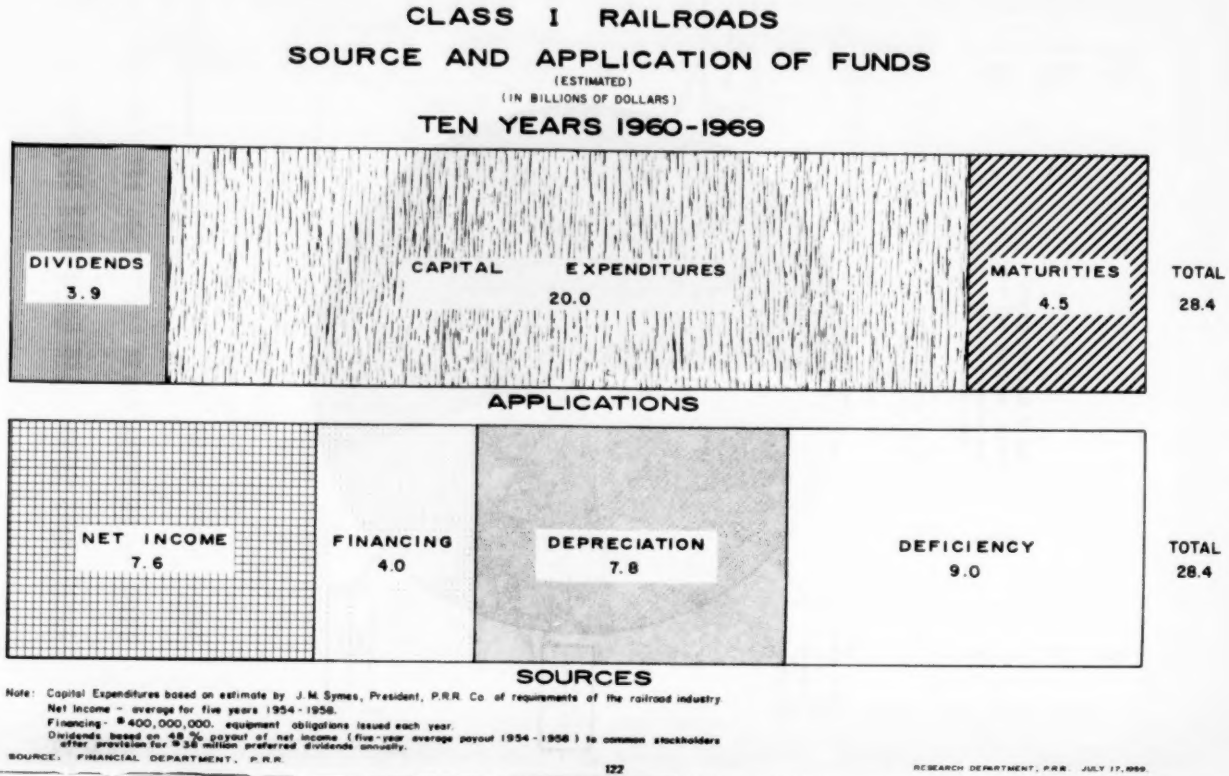
TOTAL OWNED 463

AVERAGE AGE 27.5 YEARS

Research Department, PRR 7-16-59

Research Department - PRR
July 16, 1959

Page 121. Chart, Book net assets and net income after taxes, leading corporation groups and Pennsylvania Railroad Co., 1953–58. (Too large for readable reproduction in page size. Copy on file in committee office.)



THE SUPPLY OF AND DEMAND FOR LONG-TERM CAPITAL FUNDS 1959
(IN BILLIONS OF DOLLARS)

Dividends based on 48 % payout of net income (five-year average payout 1954-1958) to common stockholders after provision for $ 36 million preferred dividends annually.

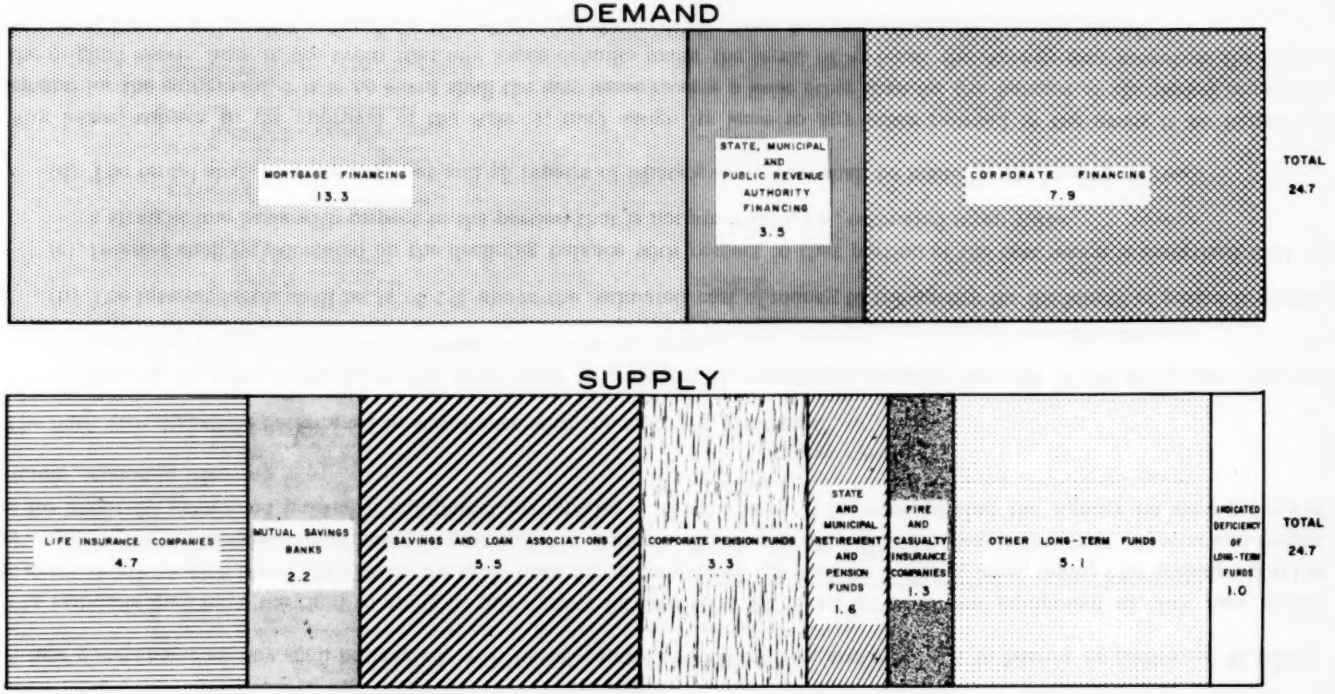
SOURCE: FINANCIAL DEPARTMENT, P.R.R.

122

RESEARCH DEPARTMENT, P.R.R. JULY 17, 1959

THE SUPPLY OF AND DEMAND FOR LONG-TERM CAPITAL FUNDS 1959

(IN BILLIONS OF DOLLARS)



SOURCE: Salomon Bros. & Hutzler

123

RESEARCH DEPARTMENT, P.R.R. JULY 14, 1959

SUMMARY OF FEDERAL EQUIPMENT PLAN

1. A new government agency shall be created, with initial capital of $500 million, and authority to borrow an additional $2 billion.

2. The railroads shall have the right to apply to this Agency for long term net leases for such new equipment as they may desire. The exact length of such leases shall be on the same basis for all companies, but shall be varied in term, taking into consideration the true economic life of the type of equipment in question. For example, diesels probably should be leased for about 15 years and freight cars for about 20 years, and passenger equipment perhaps on a 10-year basis. It is proposed that the Agency set such periods of optimum economic life.

3. The basic rental shall be determined in accordance with the following principles:

(a) During the term of the lease, the rental shall be sufficient to completely amortize the cost of the equipment, less the estimated scrap value of the equipment at present-day prices.

(b) The interest factor shall be ¼ of 1% above the estimated cost of money to the agency for the length of period involved.

(c) Interest shall be calculated on the declining balance with respect to that portion of the cost which is amortized, and on a straight line basis with respect to the portion that is not amortized, i.e., estimated scrap value.

(d) The rental shall be absolutely net and all repairs of whatsoever nature shall be made by the leasing railroad.

4. Any lessee, subject to the approval of the Agency, may assign its lease to any other railroad in the event it no longer has a demand for the equipment, but in no event shall the new lessee receive a lease other than for the balance of the period remaining to the original lessee. Also, in the event that any lessee defaults under the terms of its lease, the Agency may recapture the equipment and re-lease it to another railroad for the remaining balance of the term, but in no event for a longer period.

5. In the event there are more applications for equipment than can be handled expeditiously, the Agency shall make the allocations, on the basis of relevant information.

A SELF-LIQUIDATING FEDERAL RAILROAD EQUIPMENT PLAN

AS CONTRASTED WITH

SUBSIDIZED PROGRAMS FOR OTHER CARRIERS

20-YEAR BASIS

Item (1)	Basic Data (2)	Expenditures: General Funds (3)	Expenditures: Other (4)	Expenditures: Total (5)	Reimbursements (6)
I Government Agency for Financing Railroad Equipment Program					
A. Source of Funds					
1. Advance of Initial Capital		$ 500,000,000			
2. Public Revenue Bonds of Equipment Agency			$5,000,000,000	$2,500,000,000	
3. Equipment Purchased and Leased to Railroads:					
a. Freight Cars - 70% - 20 year lease	$1,750,000,000				
b. Passenger Cars - 10% - 10 year lease	250,000,000				
c. Locomotive Units - 20% - 15 year lease	500,000,000				
d. Total	$2,500,000,000				
B. Reimbursement					
1. Rental paid by Railroad Lessees (Including 5% interest)					$3,668,000,000
2. Scrap value realized at end of lease period (Present day scrap prices)					250,000,000
3. Application					
a. Interest @ 2.75%					
(1) On Initial Capital Advance			357,000,000		
(2) On Public Revenue Bonds			1,008,000,000	1,365,000,000	
b. Repayment of Public Revenue Bonds	$5,000,000,000				
c. Repayment of Initial Advance	500,000,000				
d. Administrative Expense, and Additional return (Profit) to Agency			53,000,000	53,000,000	
C. Totals - Sub		$ 500,000,000	$1,418,000,000	$1,418,000,000	$3,918,000,000
- Grand					
II Waterways (Inland, Intercoastal, Great Lakes and Coastal Harbors)					
A. Government Funds Provided - Construction, operation and maintenance for locks, dam, dredging, etc. Excludes flood control portion	F.Y. 1959 - $ 739,700,000	$4,784,000,000(b)			
B. Reimbursement					None
III Ocean Shipping					
A. Government Funds Provided					
1. Construction Subsidies	F.Y. 1959 - $ 141,500,000				
2. Operating Differential Subsidies	F.Y. 1959 - 125,000,000				
3. Total	266,500,000	$5,330,000,000(b)			
B. Reimbursement					None
IV Air					
A. Government Funds Provided					
1. Airways - 5 year Traffic Control and Navigation System	F.Y. 1959 - 63 - $2,619,800,000	$10,139,300,000(c)			
2. Airports - (Grants-in-Aid, including administration expenses)	F.Y. 1959 - 67,961,000	1,359,220,000(b)			
3. Air Mail Subsidy - Domestic and Overseas	F.Y. 1959 - 51,331,000	1,026,620,000(b)			
4. Total		$12,525,140,000			
B. Reimbursement - Highway Fuel Tax retained	F.Y. 1959- $ 30,000,000				$ 600,000,000

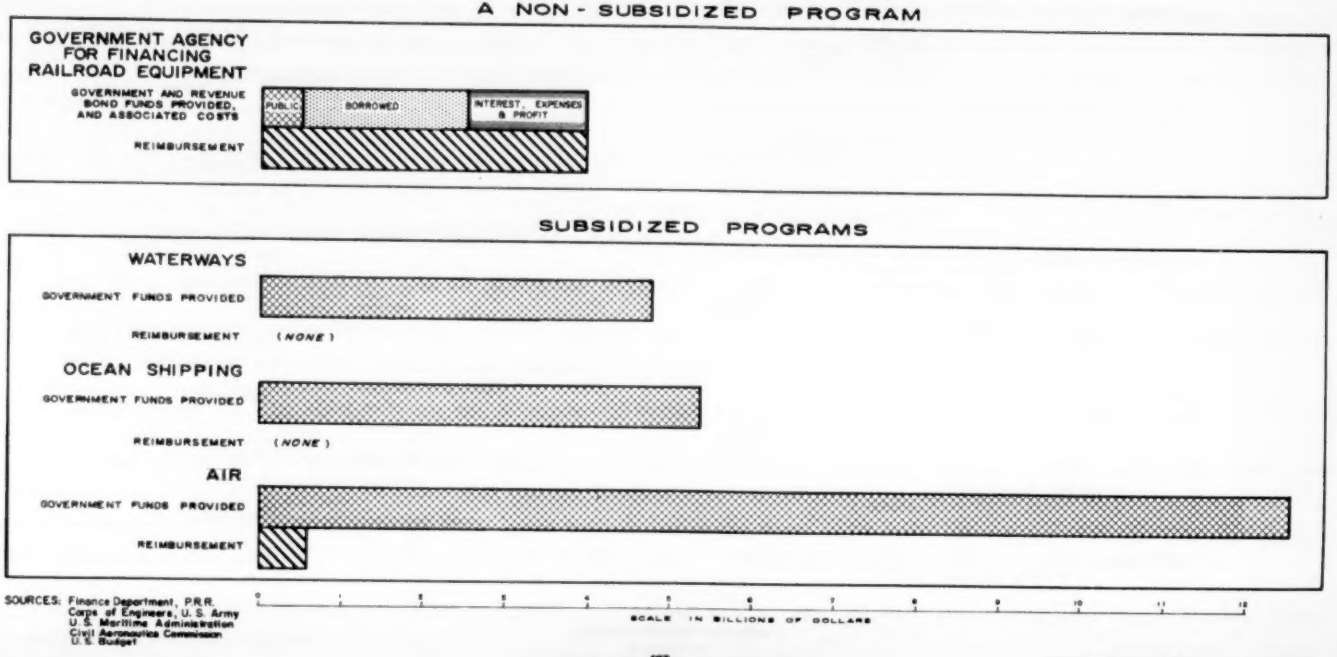
F.Y. Fiscal Year
(a) Sample basis used for this calculation. Distribution between classes of equipment would probably be different, depending on needs of lessee railroads.
(b) 20 times Fiscal Year 1959
(c) 1959-1963 5-Year Modernization Program plus 15 times C.A. estimate $187,500,000 for maintenance and operation in Fiscal Year 1963.

Source: Line I - Finance Department - FNR
Line II - Corps of Engineers, U.S. Army
Line III - U.S. Maritime Administration
Line IV-A-1, 2, 3 - Civil Aeronautics Commission
Line IV-B - U.S. Budget

Research Department - FNR
July 23, 1959

A SELF-LIQUIDATING FEDERAL RAILROAD EQUIPMENT PLAN AS COMPARED WITH SUBSIDIZED PROGRAMS FOR OTHER CARRIERS

20 YEAR BASIS



SOURCES: Finance Department, P.R.R.
Corps of Engineers, U.S. Army
U.S. Maritime Administration
Civil Aeronautics Commission
U.S. Budget

Research Department, P.R.R. July 19, 1949

CLASS I RAILROADS AND LESSORS

FUNDED DEBT OUTSTANDING AND DUE WITHIN TWENTY YEARS

CLASS I RAILROADS AND LESSORS

FUNDED DEBT OUTSTANDING AND DUE WITHIN TWENTY YEARS

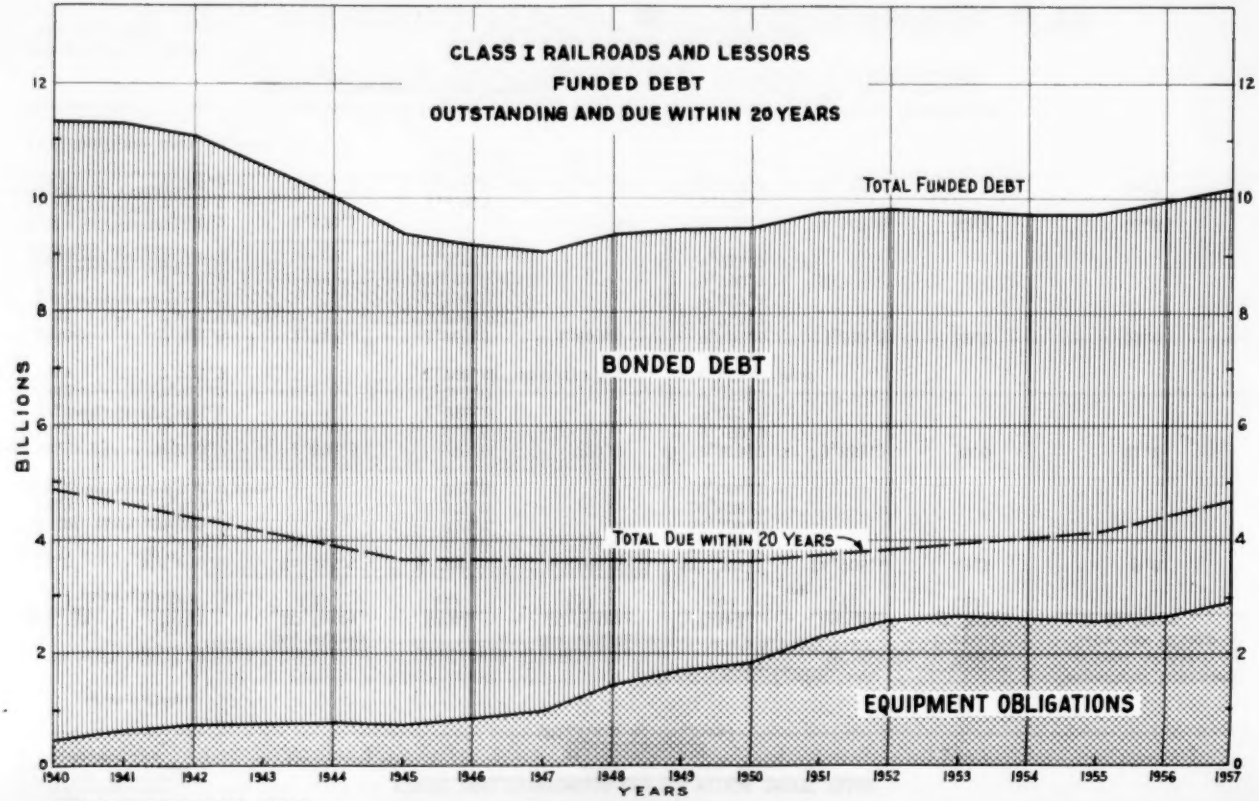
YEARS 1940-1957
(Millions of Dollars)

	Bonded Debt(a)		Equipment Obligations		Funded Debt			Percent of Equipment Debt to ALL Debt Due Within 20 Years
						Due Within 20 Years		
Dec. 31	Total	Due Within 20 Years	Total	Due Within 20 Years	Total	Amount	Percent of Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1940	$10,890.6	$4,425.9	$ 480.5	$ 480.5	$11,371.1	$4,906.4	43.1	9.8
1941	10,676.0		624.6		11,300.6			
1942	10,425.3		710.7		11,136.0			
1943	9,813.7		775.0		10,588.7			
1944	9,302.5		781.6		10,084.1			
1945	8,600.7	2,878.3	773.0	773.0	9,373.7	3,651.3	39.0	21.2
1946	8,354.7		844.6		9,199.3			
1947	7,993.4		1,084.2		9,077.6			
1948	7,911.2		1,441.0		9,352.2			
1949	7,735.3		1,708.4		9,443.7			
1950	7,622.8	1,747.4	1,863.5	1,863.5	9,483.6	3,610.9	38.1	51.6
1951	7,445.5		2,298.2		9,743.7			
1952	7,254.5		2,592.9		9,847.4			
1953	7,106.6		2,684.3		9,790.9			
1954	7,106.8		2,608.1		9,714.9			
1955	7,187.2	1,570.1	2,537.5	2,537.5	9,724.7	4,107.6	42.2	61.8
1956	7,323.7		2,634.7		9,958.4			
1957	7,207.8	1,651.6	2,914.2	2,914.2	10,122.0	4,565.8	45.1	63.8

(a) Excludes debt in default.

Source: Cols. 2 and 4 - "Statistics of Railways in the United States," Interstate Commerce Commission.
Col. 3 - Moody's Transportation Manual.

Research Department - PRR
July 23, 1959



THE PENNSYLVANIA RAILROAD COMPANY (CONSOLIDATED BASIS)

FUNDED DEBT OUTSTANDING AND DUE WITHIN TWENTY YEARS

THE PENNSYLVANIA RAILROAD COMPANY (CONSOLIDATED BASIS)

FUNDED DEBT OUTSTANDING AND DUE WITHIN TWENTY YEARS

YEARS 1940-1958
(Millions of Dollars)

Dec. 31	Bonded Debt		Equipment Obligations		Funded Debt			Percent of Equipment Debt to ALL Debt Due Within 20 Years
		Due Within 20 Years		Due Within 20 Years		Due Within 20 Years		
	Total		Total		Total	Amount	Percent of Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1940	$969.2	$359.7	$ 64.2	$ 64.2	$1,033.4	$423.9	41.0	15.1
1941	935.5		68.6		1,004.1			
1942	901.0		80.8		981.8			
1943	862.7		86.5		949.2			
1944	833.6		82.5		916.1			
1945	815.2	437.2	90.2	90.2	905.4	527.5	58.3	17.1
1946	805.0		86.9		891.9			
1947	796.4		100.9		897.3			
1948	809.6		160.3		969.9			
1949	803.4		181.2		984.6			
1950	804.9	465.3	204.2	204.2	1,009.1	669.5	66.3	30.5
1951	792.5		288.1		1,080.6			
1952	765.3		350.7		1,116.0			
1953	739.3		346.0		1,085.3			
1954	715.4		317.5		1,032.9			
1955	683.0	477.0	304.5	304.5	987.5	781.5	79.1	39.0
1956	661.1		301.0		962.1			
1957	639.9		294.3		934.2			
1958	626.5	459.3	286.1	286.1	912.6	745.4	81.7	38.4

Source: Financial Department - PRR

Research Department - PRR
July 16, 1959

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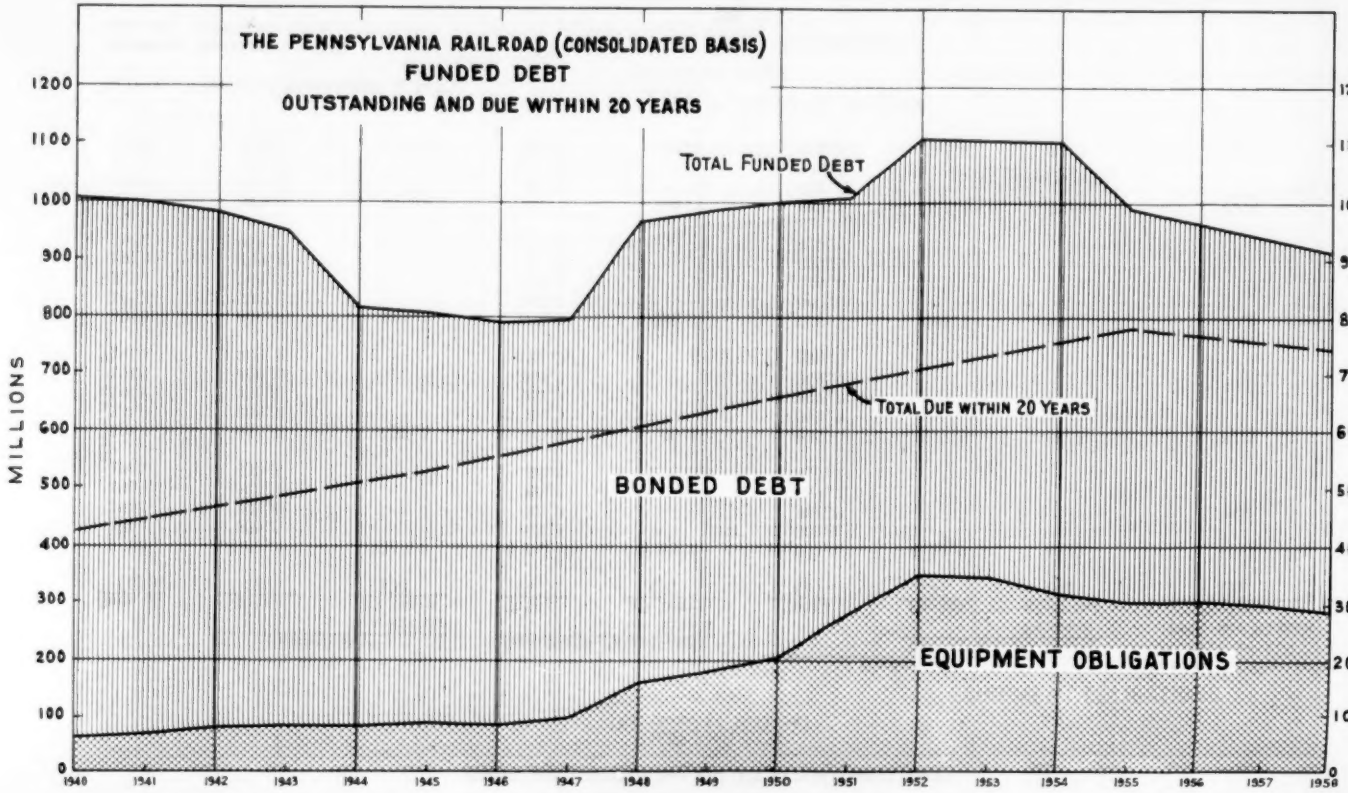


RELATIONSHIP OF DEBT TO TOTAL CAPITALIZATION

CLASS I RAILROADS and SELECTED INDUSTRIAL GROUPS

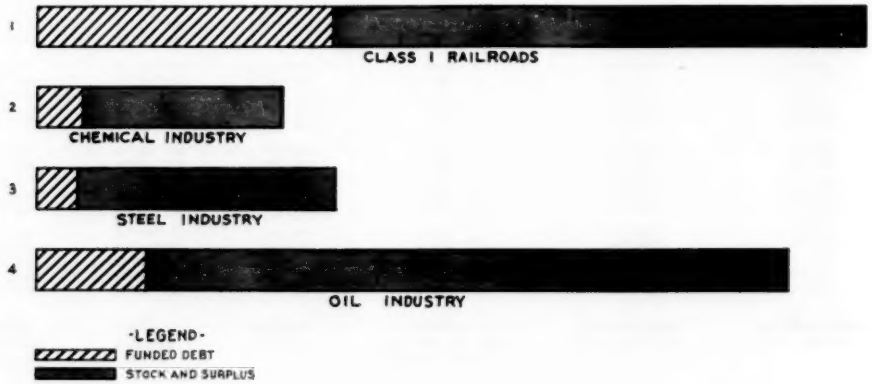
RELATIONSHIP OF DEBT TO TOTAL CAPITALIZATION

CLASS I RAILROADS and SELECTED INDUSTRIAL GROUPS

December 31, 1957
(Millions of Dollars)

Industrial Group (1)	Total Capitalization (2)	Stock and Surplus (3)	Funded Debt Amount (4)	Funded Debt Percent of Total Capitalization (5)
1. Class I Railroads	$26,646.5	$17,102.9	$9,543.6	35.82
2. Chemical Industry	7,878.6	6,454.4	1,424.2	18.08
3. Steel Industry	9,592.5	8,354.3	1,238.2	12.91
4. Oil Industry	24,153.6	20,656.7	3,496.9	14.48

Source: Line 1 - "Statistics of Railways in the United States", Interstate Commerce Commission.
Line 2, 3 and 4 - Studley Shupert & Co., Inc., Industry Composite.



Research Department - PRR
July 15, 1959

CLASS I RAILROADS

PASSENGER SERVICE OPERATIONS AND RESULTS

YEARS 1929 - 1958
(Thousands)

Year (1)	Revenue Passengers Carried (2)	Revenue Passenger Miles (3)	Passenger Revenue (4)	Average Revenue Per Passenger Mile (cents) (5)	Other Passenger Service Revenue (6)	Total Passenger Service Revenue (7)		Passenger Service Net Railway Operating Income (8)
1929	780,468	31,074,135	873,564	2.808	$ 421,550	$1,295,114		NA
1930	703,598	26,814,825	729,470	2.717	333,186	1,062,656		NA
1931	596,391	21,894,421	551,047	2.513	273,912	824,959		NA
1932	478,800	16,971,044	377,095	2.219	214,810	591,905		NA
1933	432,980	16,340,510	329,342	2.013	188,006	517,348		NA
1934	449,775	18,033,309	346,325	1.918	197,551	543,876		NA
1935	445,872	18,475,572	357,905	1.935	196,390	554,295		NA
1936	490,091	22,421,009	412,379	1.838	215,310	627,689	D	$233,327
1937	497,288	24,655,414	442,809	1.795	221,860	664,669	D	241,591
1938	452,731	21,628,718	405,883	1.875	204,924	610,807	D	255,263
1939	450,373	22,651,334	416,903	1.839	215,133	632,036	D	250,934
1940	452,921	23,762,359	417,269	1.754	217,589	634,858	D	262,058
1941	485,399	29,350,229	514,687	1.753	236,710	751,397	D	226,059
1942	667,287	53,658,615	1,028,186	1.916	319,377	1,347,563		89,329
1943	881,965	87,819,503	1,652,868	1.882	426,791	2,079,659		279,790
1944	910,295	95,549,090	1,790,305	1.874	457,837	2,248,142		234,103
1945	891,128	91,717,226	1,716,379	1.871	457,087	2,173,466		230,060
1946	790,130	64,673,453	1,259,169	1.947	384,475	1,643,644	D	139,736
1947	703,280	45,920,576	963,322	2.097	436,785	1,400,107	D	426,526
1948	642,781	41,179,040	964,303	2.341	470,689	1,434,992	D	559,782
1949	554,430	35,094,501	860,744	2.452	435,066	1,295,810	D	649,627
1950	486,194	31,760,001	813,417	2.561	580,590	1,394,007	D	508,508
1951	483,833	34,613,546	900,310	2.601	548,738	1,449,048	D	680,822
1952	469,537	34,009,986	906,185	2.664	590,504	1,496,689	D	642,390
1953	456,817	31,655,134	841,962	2.660	574,252	1,416,214	D	704,538
1954	439,356	29,286,008	767,283	2.620	544,725	1,312,008	D	669,533
1955	431,999	28,525,744	742,945	2.604	523,883	1,266,828	D	636,693
1956	428,510	28,184,928	756,582	2.684	525,809	1,282,391	D	696,938
1957	411,172	25,884,493	735,339	2.841	502,785	1,238,124	D	723,670
1958	380,335	23,271,149	675,296	2.902	1,112,704	1,788,000	D	610,400

D - Deficit
NA- Not available

Source: "Railroad Transportation", Association of American Railroads

Research Department - PRR
July 14, 1959

PENNSYLVANIA RAILROAD

PASSENGER SERVICE OPERATIONS AND RESULTS

PENNSYLVANIA RAILROAD

PASSENGER SERVICE OPERATIONS AND RESULTS

YEARS 1929 - 1958
(Thousands)

Year (1)	Revenue Passengers Carried (2)	Revenue Passenger Miles (3)	Passenger Revenue (4)	Average Revenue Per Passenger Mile (Cents) (5)	Other Passenger Service Revenue (6)	Total Passenger Service Revenue (7)	Passenger Service Net Railway Operating Income (8)
1929	108,051	4,002,210	$129,583	3.238	$50,177	$179,760	NA
1930	97,087	3,580,733	113,803	3.178	39,664	153,467	NA
1931	79,484	2,917,314	86,818	2.976	31,995	118,813	NA
1932	61,028	2,187,226	59,739	2.731	25,073	84,811	NA
1933	52,843	2,016,645	52,930	2.626	21,914	74,845	NA
1934	55,544	2,209,928	57,741	2.613	23,139	80,879	NA
1935	56,740	2,217,260	59,797	2.697	23,004	82,801	NA
1936	64,618	2,881,802	67,552	2.344	26,160	93,712	Def. $12,159
1937	65,395	3,294,746	71,643	2.174	27,184	98,828	Def. 15,219
1938	58,593	2,913,408	65,796	2.258	24,226	90,023	Def. 10,364
1939	60,476	3,147,223	71,107	2.259	26,575	97,682	Def. 13,099
1940	64,244	3,441,635	71,623	2.081	27,412	99,035	Def. 15,601
1941	74,501	4,329,901	89,023	2.056	29,668	118,691	Def. 10,792
1942	114,694	7,829,326	169,122	2.160	38,947	208,069	31,263
1943	158,183	12,168,329	245,537	2.018	51,613	297,150	48,180
1944	164,611	13,051,158	260,805	1.998	52,741	311,546	41,609
1945	159,681	12,802,328	258,864	2.022	46,441	307,246	56,834
1946	133,745	9,695,344	207,024	2.135	39,449	246,473	790
1947	112,900	6,783,773	159,327	2.349	49,702	209,029	Def. 39,536
1948	100,481	6,033,767	160,304	2.657	55,985	216,289	Def. 44,736
1949	86,896	5,049,455	149,242	2.956	52,721	201,963	Def. 49,431
1950	75,192	4,367,658	142,374	3.260	71,834	214,208	Def. 34,845
1951	76,873	4,840,992	156,149	3.226	67,554	223,703	Def. 71,688
1952	72,879	4,749,918	156,316	3.291	71,446	227,763	Def. 60,537
1953	68,794	4,322,525	142,097	3.287	85,666	214,091	Def. 56,650
1954	64,862	3,881,216	126,504	3.259	68,083	194,586	Def. 43,691
1955	63,148	3,744,340	121,157	3.236	64,569	185,725	Def. 49,976
1956	62,476	3,719,882	123,782	3.328	65,871	189,653	Def. 54,683
1957	58,743	3,429,732	121,740	3.550	64,600	186,340	Def. 57,531
1958	53,612	2,928,127	108,140	3.693	72,583	180,722	Def. 44,356

NA Not Available

SOURCE: PRR Annual Reports to the Interstate Commerce Commission.

Research Department - PRR
July 13, 1959

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Passenger,			
cars, number and capacity	40	41	40
miles	51	51	
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